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INTRODUCTION
TO THE
BIRDS OF GREAT BRITAIN.

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INTRODUCTION

TO THE

BIRDS OF GREAT BRITAIN.

BY

JOHN GOULD, F.R.S., &c., &c.



LONDON:

PRINTED FOR THE AUTHOR,

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1873.

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TO
THE RIGHT HONOURABLE
ROWLAND, VISCOUNT HILL,
OF HAWKSTONE,
LORD LIEUTENANT AND CUSTOS ROTULORUM, COUNTY OF SALOP,
THIS WORK
ON
THE BIRDS OF GREAT BRITAIN
Is Dedicated,
BY THE AUTHOR,
IN
TESTIMONY OF HIS SINCERE RESPECT AND REGARD
AND IN
COMMEMORATION OF
AN UNINTERRUPTED FRIENDSHIP OF MORE THAN
FORTY YEARS.



TO THE READER.

IN pursuance of the course adopted when preparing the introductory matter of my works on the 'Birds of Australia,' the 'Mammals' of the same country, and the 'Monograph of the Trochilidæ,' I have had the 'Introduction to the Birds of Great Britain' set up in small type for the convenience of correction before printing it for the folio work; by this means I have been enabled to review the entire subject, to draw up a complete list of the species I have thought it advisable to include in the British avifauna, and to make those corrections and additions which have become necessary while the work was in progress.

It should be borne in mind that this 'Introduction' is not intended in any way in substitution for the letterpress already published in the folio work, but rather in augmentation of what is there stated and as a general summary. Those who do not already possess the folio edition will not be able to dispense with it on the acquisition of the present volume, while, it is hoped, it will be found a useful supplement and index.



PREFACE.

THE question may naturally suggest itself to some of my readers, what object I had in view in publishing a work on the Birds of Great Britain, when I had already completed a similar publication on the avifauna of Europe. My reasons are simply these:— Before the latter was completed the entire edition was all or nearly all sold; and very many persons interested in this department of science were disappointed in not being able to procure a copy of a work which they saw in the hands of so many others. Consequently, on the completion of my ‘Birds of Australia,’ at the solicitation of a large number of private friends and others, and influenced by the increased taste for natural history that had sprung up in the interim, I “returned to my old love” by publishing the British Birds, excluding those of the continent, thus complying with the wishes of those persons who have especially paid attention to our native ornithology. I also felt that there was an opportunity of greatly enriching the work by giving figures of the young of many of the species of various genera—a thing hitherto almost entirely neglected by authors; and I feel assured that this infantile age of bird-life will be of much interest for science, to my subscribers, and to readers generally.

That my efforts to render this publication a standard work have been successful is evidenced by its sale being double that of any other work I have given to the public. Many of the numerous ornithologists who have arisen within the last few years have rendered me much valuable information—a kindness which I duly acknowledge, and trust that, although not specially mentioned in this short Preface, they will take it for granted they have not been forgotten, and that their names have been generally associated with the various subjects to which their communications have reference.

Many of the public are quite unaware how the colouring of

these large Plates is accomplished; and not a few believe that they are produced by some mechanical process or by chromo-lithography. This, however, is not the case; every sky with its varied tints and every feather of each bird were coloured by hand; and when it is considered that nearly two hundred and eighty thousand illustrations in the present work have been so treated, it will most likely cause some astonishment to those who give the subject a thought.

I am truly and sincerely thankful for the blessing of health which has attended me during the course of my twelve years' labour on the present work; and it was only while the Introductory matter was going through the press that a severe blight fell upon me (the untimely death of my youngest son, Dr. Franklin Gould*), and cast a gloom over my future happiness. I should not have alluded to this painful subject here did I not feel it was only doing justice to his memory, inasmuch as he rendered me much assistance in the composition of the following Introduction, which, from his varied acquirements, he was well qualified to give. His loss has called forth the sympathy of many kind friends, which has in some measure assuaged the sad affliction which has befallen me. If I am spared it is my intention not to be idle; for although I do not entertain the idea of entering upon any new enterprise, I shall still pursue the subject with the same energy I have hitherto done,—at one period of the year attending to the Birds of Asia, at another to the recent discoveries in the ornithology of Australia, pursuing the subject to New Guinea and the adjacent islands, the avifaunas of these latter countries being inseparable.

It gives me great pleasure to state that my Secretary, Mr. Prince, after twelve months' of very severe illness, is again able to render me his assistance, that Mr. Wolf affords me the benefit of his talented pencil, and that Mr. Richter and Mr. Hart continue their services as heretofore.

JOHN GOULD.

November 1, 1873.

* Dr. F. Gould died of fever on board the Steamship 'Behar' on the 19th of March last, during his passage from India to Suez, and was buried the same day in the Red Sea.

INTRODUCTION.

IN the olden time when the wolf and the wild boar roamed over the primitive forests of Great Britain, when the beaver held its own in our silent and undisturbed streams and lakes, when the red deer followed our mountain tracks in all the vigour of its pristine condition, when our marshes and great sedge-covered watery wastes were yearly visited by the Crane and the Spoonbill, the earliest dawn of natural history which was to herald the light of future ages had not yet broken upon the untutored Celt, who alone shared with those animals the possession of our islands. With the progress of civilization that obscurity has been gradually dispelled; and, happily for our country, from the time when Gilbert White wrote his charming account of Selborne, the study of natural history, more particularly with reference to our native birds, has gradually increased, until its pleasures have become widely known to both young and old. The talented Bewick rendered the subject still further attractive by his inimitable and truthful drawings; then followed in the same path Selby, Macgillivray, Thompson, and Yarrell, whose writings have made this branch of science so popular that it now engrosses the minds of thousands. Of the truth of this statement ample evidence is afforded by the numerous works (both great and small) which have been recently published, by the many local faunas which have lately appeared, and by the establishment of naturalists' clubs and associations in many parts of the country. Such has been the impetus given by these means to the study of natural history that it will scarcely be presumptuous in me to foretell that a period is not far distant when our native birds will be far more familiarly known to the people than they now are. For, although it may appear surprising to many of my readers, I assert that at the present time there are but few persons who could enumerate by name even a fourth part of the birds with which we are surrounded. Country people are familiar enough with the call of the Wryneck, the voice of the Cuckoo, and the crake of the Landrail; but few, very few, would recognize those birds if placed before them. Will it not, then, be well to encourage the formation of natural-history societies to the utmost, and doing so enlighten the minds of those who have hitherto been much in ignorance? With this spread of knowledge, mythical traditions such as that of the hibernation in caves or under water of such a bird as our common Swallow (traditions not confined, as might be presumed, to a remote country village, but which from time to time have found utterance in the lips of educated people) will happily cease to exist; while the timid rustic, gradually freeing himself from the countless superstitions connected with many of our birds, will no longer pause with bated breath when startled at night by the not very cheerful cry of the Screech-Owl. To be in the country and not to care to recognize or be able to discriminate between the musical notes of the Thrush, the plaintive song of the Blackbird, the carol of the Lark, or the exquisite lay of the

Nightingale, is to me surprising ; yet that such people exist is but too well known. Shakespeare and our earlier poets duly appreciated, however, the varying melodies of our feathered songsters, and have never been slow to accord to each its well-earned tribute of praise :—

“ It was the nightingale, and not the lark,
That pierced the fearful hollow of thine ear ;
Nightly she sings on yon pomegranate-tree ;
Believe me, love, it was the nightingale.”—
Romeo and Juliet, act iii. scene 5.

Again :—

“ The busy larke, messenger of daye,
Salueth in hire song the morwe gray :
And frye Phebus ryseth up so bright,
That al the orient laugheth of the light.”—
CHAUCER, *Knights Tale*.

Or :—

“ Hark how the cheerefull birds do chaunt theyr laies,
And carroll of loves praise.
The merry larke hir mattins sings aloft,
The thrush replyes, the mavis descant playes,
The ouzell shrills, the ruddock warbles soft ;
So goodly all agree with sweet consent
To this dayes merriment.”—
SPENCER, *Epithalamion*, 1595.

The study of natural history reveals to us a wide field, pregnant with interest and pleasure. The geologist, who, from the various aspects of nature, attempts to form a conception of how this planet has been formed, and the naturalist, whose senses are keenly alive to the beauty and importance of the manifold living objects which meet his gaze on every side, are pursuing a course calculated to lead to the highest and happiest results. Even the humble cottager who decorates his windows with flowers, and the artisan who keeps and encourages his little birds to sing and to solace him, are imbued with tastes of a superior order, which, if properly cultivated, cannot fail to induce a greater intellectual development, and consequently an increase in happiness.

Granted that the antiquary in poring over some dusty relic of a by-gone age experiences a thrill of pleasure denied to others, or that the wealthy man filling his rooms with the finest efforts of the artist's pencil, and his cabinets with articles of rare and costly workmanship, thereby experiences a very high degree of gratification, or even that the man of pleasure, fulfilling the daily routine demanded by fashion, finds in it some irresistible attraction—yet what are these enjoyments compared with those daily and hourly offered to the student of nature ! Does he not see in the growth of a blade of grass, or in the mechanism which enables the tiny gnat to effect the countless vibrations of its gauzy wings, or in the majestic ease of the soaring eagle, evidences of a power and skill immeasurably superior to those

ever originated by man? Can he walk in the fields without seeing and hearing around him sights and sounds which, while tending to make him more and more thoughtful, deeply impress him with a sense of the wisdom, the power, and the beneficence of his Creator? That man who has passed his allotted time in ignorance of the teeming worlds of life around him, has had denied to him pleasures and delights the experience of which must have gone far to elevate the noblest of God's created beings. "The study of ornithology has always been a favourite one with me," says the late Mr. Wheelwright, "and is one of the few innocent pleasures of youth which follows a man into maturer years, and upon which he can look back in the decline of life with feelings of pure and unalloyed delight. Man's constant companions in every outdoor occupation, cheering him with their presence and their songs, and often affording him a principal means of subsistence, it is little wonder that the study of the habits and instincts of birds should be a favourite one with most persons; and to him whose time is quietly and happily spent in the forests and the fields it adds one of the truest zests to rural life."

Notwithstanding the limitation of area implied in a work entitled 'The Birds of Great Britain,' the most elementary student of natural history must acknowledge that in numbers and in interest, if not in beauty of marking, our avifauna will bear a favourable comparison with that of other countries of similar extent. The one most closely approximating to it would appear to be that of Japan—a fact sufficiently surprising when we remember the vast continent embracing many degrees of longitude stretching between the two. But the resemblance may possibly be explained by the similarity existing in their physical conditions and in the general character of their natural productions. Both countries are blessed with a temperate climate especially suited to similar forms of bird-life, some species identically the same occurring in each; but, in addition, Great Britain offers in its numerous islets, its rocky promontories and extensive marshes, its natural forests and heathy expanses, certain advantages of locality not perhaps enjoyed by Japan to the same extent, and which are singularly well adapted to forms of the most opposite kinds.

One feature of especial interest must always strike the naturalist in studying the birds of the temperate zone, viz. the alternation of its feathered immigrants, which lends such a charm to the scenery, a charm which is greatly enhanced when we reflect that these migratory movements are governed by certain infallible laws. Thus the arrival and departure of the Swallow, the Cuckoo, the Landrail, &c. is as strictly regulated as the recurrence of the seasons:

"Yea, the Stork in the heavens knoweth her appointed times; and the Turtle and the Crane and the Swallow observe the time of their coming."

Besides being tenanted by about one hundred and fifty stationary species, Great Britain has migrants and occasional visitants from the four points of the compass; thus, in spring, nearly fifty species visit us from the south—whilst in the autumn our milder and more equable climate attracts a still larger number from the north, who instinctively know they will here find that food and shelter which the rigorous

winters of more northern regions deny to them. In addition to this true and characteristic migration, our islands are occasionally resorted to by certain species which, from some unknown cause, make a movement from east to west; whilst the pseudo-migration from west to east is exemplified in the rarely occurring American forms which from time to time have been recorded, and which, blown off from their native shore, find in the masses of seaweed, uprooted trees, and portions of wreck constantly approaching our coasts through the agency of the Gulf Stream, that means of rest and recruitment which finally enables a few of them to reach a welcome though far distant haven. A remarkable degree of capriciousness, which to me has always appeared mysterious, occurs in the choice of localities affected by certain of our migrants: thus the Pied Flycatcher will not rest until it has reached the middle and northern counties of England, while the Nightingale almost restricts its visit to the southern, eastern, and central ones, never favouring Cornwall with its presence, and but rarely going into Devonshire or Wales, or further north than Yorkshire or Durham. Again, some species, exemplified in many of the Plovers and Sandpipers, make our islands but a halting-place, pausing for rest only on their way to unknown and probably far distant regions.

The mysterious law or laws which govern migration must always be regarded by the naturalist with the utmost interest. Within our own islands hardly a month passes by without the movement of some species occurring to remind us of the existence of such a principle. In the early spring, before the Wheatear, that earliest of our visitors from the sunny south, has arrived, the Fieldfare and Redwing which during the winter have peopled our hedgerows and fields, the Geese, Ducks, and numerous wading-birds which have been frequenting our broads and rivers, have, in obedience to nature's prompting, commenced a movement northward, *en route* for localities better suited, by their quietude and by the nature of the food found there, for the propagation and rearing of their progeny; then, as the rays of the life-inspiring sun strike upon our earth with daily increasing strength, we begin to welcome in quick succession those little feathered arrivals which make the spring and early summer seasons of so much enjoyment and anticipation to all true lovers of nature. March, besides the Wheatear, brings us the Chiffchaff and the Sand-Martin; April's earliest days herald in the Swallow, Wry-neck and Martin; by the middle of that month the Nightingale has made its appearance, together with a host of other sylvan species; soon after, the Cuckoo and Landrail arrive; and on the joyous First of May the latest of all comers, the Swift, the Nightjar, and Flycatcher may be looked for. A pause of a few weeks follows; and, reproduction having been accomplished, then commences, as it were, the ebb of the great tide of migration. The Swift, which, as we have seen, was one of the latest to arrive, is the first to depart; then the Landrail makes good its retreat to the more southern country of Africa; other kinds follow in succession, all hastening to make their escape before such changes of climate and natural conditions have

set in as would prove fatal to their existence, either on account of the lowering of the temperature or the cessation of suitable food. By the end of September the great mass have departed, and only a scanty remnant are to be met with. With this same ebb, the autumnal months bring to our sight again strings of gullatorial and natorial birds, urged by similar causes from the northern regions back towards the south in search of that food and aquatic life which the icy hand of winter had already begun to grudge them and their progeny in their summer location. To follow the sun appears to be the course of true migration; but the promptings of instinct which lead the Swallow and many other species to quit our shores, after a brief sojourn, for Africa, or those which lead the Fieldfare and the Redwing to quit the Norwegian 'fjelds' for our cultivated lands, must surely be connected in some way with, if they have not for their sole object, the provision of food and climate suitable to the species. The Rev. H. B. Tristram remarks that "those species which have the most extended northerly have also the most southerly range, and that those which resort to the highest latitudes for nidification also pass further than others to the southward in winter. Thus the migratory Fieldfare and Redwing, visiting regions north of the limits of the Thrush and Blackbird, on their southern migrations likewise leave their more sedentary relatives behind. The Brambling, which passes the Chaffinch in Norway, leaves it also in Europe, and crosses the Mediterranean every winter to the Barbary states." (*Ibis*, 1865, p. 77.)

The regularity, however, which occurs in the arrivals of our summer visitants is not quite so strictly adhered to in their departures. Having accomplished the purpose for which they came, these depart again at varying periods, but mostly as soon as the renewal of their primaries will admit of their flying across the channel, leaving their young to follow instinctively (when their muscular development has been sufficiently matured) the same route by which their parents have preceded them. This apparent desertion of the young birds at a period when one would imagine the presence of their parents as leaders would be absolutely essential, seems to prevail amongst many of our migratory species. That the old birds should be able instinctively to wing their way back to whence they came is not half so marvellous as that the newly fledged nestling, urged by some mysterious power, should undertake a flight extending over hundreds of miles and many variations of climate in search of a temporary home it has never seen. This irresistible impulse, which prompts the necessity of a migration somewhither, is but too sadly seen in the restless actions and almost frantic efforts of the caged Turtle Dove, Nightingale, or Whitethroat during the period at which, were they free, they would be leaving our shore; once let that period be passed, their efforts cease, and apparent resignation to their prison ensues. "It sometimes happens," says Mr. R. Gray, "that Swifts, obeying their unconquerable instincts, will at the close of a stormy season desert their unfledged young, and leave them to perish of hunger. Late breeds especially are subject to this unnatural desertion,

Oftener than once I have seen the little round sooty faces of the young ones peering out of their holes and plaintively crying for food, after which they have crept back to die. In these very nests, on the return of another season, the same old birds have been known to rearrange their building-materials, a few straws being merely laid over the bones of the abandoned to receive a new family."

It is a matter of surprise to some persons, as indeed it may be to the most astute philosopher, how such frail little birds as the Chiffchaff and its allies can cross the sea from France or Portugal without exhibiting any very apparent signs of fatigue; yet we know that they do so, and moreover that a still smaller species, the Goldcrest (*Regulus cristatus*), effects a much longer passage when crossing the German Ocean in its migration from the opposite parts of the Continent. I must not omit to mention, however, that occasionally hundreds of these diminutive birds are found in an exhausted state in the early morning on the Northumberland and Norfolk coasts; and in support of this I may quote here a very interesting passage from the work of the late gifted Mr. Selby, which runs thus:—"On the 24th and 25th of October 1822, after a very severe gale, with thick fog, from the north-east (but veering towards its conclusion to the east and south-east), thousands of the Goldcrests were seen to arrive upon the sea-shore and sandbanks of the Northumbrian coast, many of them so fatigued by their flight or perhaps by the unfavourable shift of the wind, as to be unable to rise again from the ground; and great numbers were in consequence caught or destroyed. The flight must have been immense in number, as its extent was traced through the whole length of the coasts of Northumberland and Durham. There appears little doubt of this having been a migration from the more northern provinces of Europe (probably furnished by the pine-forests of Norway, Sweden, &c.), from the circumstance of its arrival being simultaneous with that of large flights of the Woodcock, Fieldfare, and Redwing."

Woodcocks, we know, generally arrive in fair condition on our north-eastern shores at dawn, with a wind that is either easterly or within a point or two of that direction; but should the wind shift after their flight has commenced, the increased muscular effort required lands them on our coast in an exhausted and emaciated state. Assuming, however, that birds, both great and small, have availed themselves of a favourable slant of wind, no great amount of muscular effort would be requisite, inasmuch as those arriving from the south will require little more than an hour to cross the Channel, while the passage of the German Ocean by those coming from the north may occupy a short night*. It is interesting to note that some of our migrants effect the passage to our shores during the night, and others by day; as a rule, it is the small sylvan birds which come at the former time, as is evidenced by numbers being found at the base of the various lighted beacons of our southern and south-eastern coasts, against which, attracted by the light, they have flown and killed

* As an evidence that birds are capable of taking very long flights with apparent ease, I may quote a letter to 'The Times' of June 27, 1872, which

themselves; the Swallows, the Cuckoo and the Turtle Dove, on the other hand, wing their way across in broad day-light.

Besides the regular migration of certain species, a remarkable shifting of locality occurs with others, not only in our own, but in many other parts of the world, the cause of which is totally unknown. Starlings are now very abundant in Cornwall, and Missel-Thrushes in Scotland—in which they were formerly not to be seen. Such interchanges of locality are doubtless occasionally due to alterations in the face of the country: but this was not the cause in the case of Cornwall; for no county can have undergone less alteration; as it was in the days of Julius Caesar so it is now, unless we except the operations of mining, which naturally only affect the surface of a district to a small extent. The sudden appearance of Pallas's Sandgrouse (*Syrhaptus paradoxus*) in our islands and on various parts of the Continent, in 1859-60, must be in the recollection of every one. This irruption of a strange bird from the distant country of Siberia, perhaps from China, was very astonishing; and it well illustrates my meaning, which may be further exemplified by the mention of two similar occurrences in Australia. In the year 1839 the whole of the southern and eastern portions of that country was suddenly visited by millions of the little Grass Parrakeet (*Melopsittacus undulatus*); and a year or two later swarms of a species of Water-hen (*Tribonyx ventralis*) spread themselves like a cloud over the Swan-River district, destroying fields of corn and garden-produce and committing ravages unheard of before; and both these species have kept their hold until the present day, but of course in much smaller numbers. Although not necessarily bearing upon the preceding remarks, it may be here mentioned that young birds appear to wander further from their native homes during the first autumn or year of their existence than they do afterwards, going out, as it were, to see the world before settling down for the proper business of

further shows that the electric telegraph has not wholly deprived us of the usefulness of the Carrier Pigeon. The communication alluded to runs as follows:—

"SIR,—The promoters of the system of electric telegraphy insist on its immense superiority over the older plan of pigeon-despatches. How far these pretensions are founded on facts is shown by the results of the pigeon-race to Brussels, which started from the Crystal Palace on Thursday last, when 72 birds were flown at noon. Immediately on their departure I telegraphed to the secretary of the society whose members had forwarded the birds, announcing their departure. The first birds arrived in Brussels at 5.28 P.M., and the telegram at 5.30 P.M.

"Another example, and I have done. During the Crimean War the intelligence was conveyed to Colombo, Ceylon, 70 miles north of Point de Galle, where the ships to India landed their despatches, and the salute fired on the news of the fall of Sebastopol resulted from information brought by them. The electric telegraph was established, and the pigeon-post abolished. I have recently been requested to restock Colombo with Belgian "voyageurs," as the information brought by the electric wire is neither so speedy nor so correct as that conveyed by the birds. The Prussians, wise in their generation, have taken lessons from the Parisians, and established pigeon-posts in Metz and their other fortified towns. In the event of a war in which we may be engaged, what would be the value of birds that would convey messages to Jersey, Guernsey, &c., when telegraphic wires had been cut by the enemy?"

W. B. TEGTMEIE

their lives ; hence, doubtless, it is, that the young of so many of the rarer northern species (Eagles, Gulls, Divers, &c.) are found further to the south than the old birds.

With respect to the autumnal departure of many kinds of our smaller migrants, it would appear that most, if not all of them, assemble along our south coast ready for departure on the occurrence of a favourable wind. Having once crossed the channel to France or Portugal, their further southern journey becomes an easy one, and is doubtless performed by short stages until they reach the shores of the Mediterranean, which in the case of our own birds is probably crossed at the narrowest portion, viz. Gibraltar, or some other promontory of Southern Spain, their destination being the coast of Morocco ; on the other hand, those of Central Europe migrate by the way of Sicily and Malta to Algeria, while those which have passed the summer still further east proceed in a direct line to Egypt. North and south, and *vice versa*, is in my opinion their instinctive movement ; and this natural impulse is so blindly followed that the Quail, when migrating, will, if possible, fly through a house or over a mountain rather than turn aside from its course, which would not be the case were reason its guide ; in this respect it resembles the Norwegian Lemming, whose onward course is stopped neither by lakes nor hills, and some species of ants, whose movements are equally undeviating.

The British Islands and Europe generally, to which the foregoing remarks on migration almost solely refer, are, however, only a small portion of the globe subject to such interchanges of bird-life at different seasons of the year ; the avifauna of the great continent of Asia, a continent having the loftiest mountains, the most elevated plateaux, and the richest forests in the world, is subject to similar laws. So, again, if we cross the equator and take a view of what occurs in the southern hemisphere, we shall find that a precisely similar movement takes place there, but of course at opposite seasons, the antipodean summer being coincident with our winter. In many instances bird-life is there represented by species of a similar form to those we find in our own country, and which evince a tendency to a movement north and south at certain periods of the year as with us.

Although in the foregoing remarks I have used the terms migrant and migratory in their ordinary acceptation, it will be as well before quitting the subject of migration to place before my readers what I consider should be the strict meaning of the word migrant. The country a bird resorts to for the propagation of its species should be regarded as its true habitat : thus the Swallows and others, although they pass only half the year in the British Islands, are really not migrants in the same sense of the term as that in which we should so regard the Fieldfare and Redwing, who, although resident with us during the winter, retire to Norway and other northern regions for the purpose of breeding, and who are impelled to visit our country solely to obtain the food necessary for their existence. But whilst regarding the species visiting us from the north during the winter months, such as the Woodcock, Ducks, Fieldfares, Redwings, &c., as

true migrants only, it must be recollected that the Swallow, Chiff-chaff, Cuckoo, &c., species leaving us at the same portion of the year, are migrants so far as the countries they respectively winter in are concerned.

Could a census be taken of the smaller birds inhabiting Great Britain, such as Sparrows, Chaffinches, Buntings &c., and of the same birds frequenting a similar area on the Continent, there can be little doubt that the former would greatly outnumber the latter—a circumstance which may be partly due to our islands affording many more favourable localities, and partly to the fact that our smaller birds are not, as a rule, killed or captured for the purposes of the table, a practice which prevails abroad: of these latter, the Wheatear and the Lark are almost the only kind that are thus utilized; but to form an estimate of the numbers of the latter obtained by means of the trammel-nets of the birdcatcher, or of the former captured on the downs of Sussex and Kent, is quite impossible. The numbers of many species are, indeed, so great that no just estimate of the whole can be formed. Thus it has been computed that the Gannets frequenting the Bass rock cannot be less than twenty thousand; how vast, then, must be the number of that species alone around our coasts, when we take into consideration that they are proportionally as numerous on Ailsa Craig and the other rocks on which they are known to breed; the myriads also of the Dunlin and other strand-loving birds frequenting our bays and inlets are beyond all computation.

Unfortunately, however, of late years vast numbers of certain species have been destroyed, either wantonly, or for senseless purposes of decoration instigated by fashion; and to such an extent has this been carried that it has become necessary to enact laws for their protection. Whether such enactments will tend to prevent the wholesale and cruel destruction of Robins, Kingfishers, Chaffinches, &c. is yet to be seen; at all events if a law can be framed to put a stop to these proceedings, it will be most desirable. The magistrate, however, should have the power of acting according to his judgment when such malpractices are brought under his notice; for to say that the St. Kildan (for whom, however, special exception has been made) should not take the Fulmar or its eggs, which constitute almost his sole subsistence, or that the proprietor of the Farn Islands should not collect the down of the Eider, though it may interfere with the health of the birds, or that those delicate morceaux, Plovers' eggs, should not be taken, would be absurd. Bird-catching should be restricted to certain seasons; the idler who spreads his nets for the capture of the Swallows that skim over the mead, or who hangs his invisible snare across the brook for the beautiful Kingfisher to fly into, the man who professedly catches every Chaffinch in a lane, and the clever scamp who prowls round the edge of every shrubbery at daybreak for the newly arrived Nightingale, should be made to know that such practices are inadmissible, and that they have no moral right to such a course of procedure, compared with which the conduct of the old Whitechapel bird-catcher is an honest calling.

The following extract from 'Land and Water' of August 29, 1868,

embodying a letter to 'The Times,' aptly bears out my previous remarks on the wholesale destruction recently dealt out to certain species.

"No words can convey any adequate idea of the wanton, wicked cruelty perpetrated by these ruthless slayers of unoffending birds. Broken-winged birds are abandoned, and drift away to perish by slow degrees; badly wounded birds are allowed to flutter and struggle in the bottom of the boat, their sufferings unheeded and uncared for; while many fearfully hurt manage to reach the shore to die in lingering agony: and, lamentable to say, all this butchery is committed for no good purpose. We find a letter in 'The Times' headed 'A Plea for the Kittiwake,' in which it is remarked that 'some months ago a contributor to a popular journal of natural history, writing from Lincolnshire, disclosed the fact that London and provincial dealers now give one shilling per head for every 'White Gull' forwarded—that one man (a stranger drawn thither for profitable occupation) boasted of having last year killed with his own gun at Flamborough Head 4000 of these gulls—and that another sea-fowl shooter had an order from a London house for 10,000, all for the 'plume trade.' During the present summer,' it is added, 'one of these *plumassiers* has visited various breeding-stations of the Kittiwake in Scotland, and laid his plans for having supplies of birds sent to him. At Ailsa Crag alone, he gave an order for 1000 Gulls per week, and there stated that he was prepared to take any quantity. To meet this demand the tacksman of the rock spread his nets while the birds were sitting on their newly hatched young, which were left in hundreds to perish on the ledges.' By reference to the letter from which the above is extracted, and which appeared in 'The Times' for August 21st, it will be seen that an Act has this year received the Royal Assent for the preservation of sea-fowl in the Isle of Man, and that its preamble states that 'the said birds are considered of great importance to the fishermen in guiding them to shoals of fish, and also for sanitary purposes by removing offal of fish from the harbours and shores.'"

Again, in a communication to the 'Zoologist' for January 1869, Mr. John Cordeaux says:—"The following paragraph is copied from the 'Guardian' of November 18, 1868. Comment is unnecessary. 'On a strip of coast 18 miles long, near Flamborough Head, 107,250 sea-birds were destroyed by *pleasure parties* in four months, 12,000 by men who shoot them for their feathers to adorn women's hats, and 79,500 young birds *died of starvation* in emptied nests. Commander Knocker there stationed, who reports these facts, saw two boats loaded above the gunwales with dead birds; and one party of eight guns killed 1100 in a week.'"

Nature on the other hand herself at times effects similar wholesale destruction; thus a severe winter may prove fatal to many thousands of the feathered creation: in support of this assertion I annex some extracts from various sources. Under the heading "Severity of the Weather" we read in 'Land and Water' for January 26, 1867.

"We receive from various parts of the country accounts of the

effects of the recent cold upon all kinds of game. A correspondent of the *Inverness Courier* says that in Strathnairn, in common with other parts of the country, not a sprig of heather is visible anywhere, and there can be no doubt that if the snow and frost continue any length of time the destruction among all kinds of game will be beyond all precedent. Already Muirfowl are flocking in thousands to the low-lying grounds, and on Saturday last we noticed the birchwood around Craggie literally swarming with them. A farmer in Strathnairn told us that one day lately, as he entered his stable, the entire area of his courtyard was covered as 'thick as they could stand' with grouse picking up anything they could get among the dung-heaps; and similar 'gatherings' could be told by many other farmers."

Again, in the same journal, for August 3, 1867, Mr. Henry Lee, writing of the "destruction of small birds by rain," says:—

"My friend Dr. Millar, of Bethnal House, Bethnal Green, writes me as follows:—'Good evidence of the severity of the rain during Thursday night (July 25th) has been afforded here in the destruction of nearly all the sparrows which congregate in our trees. My undergardener picked up one hundred and twenty-four on the following morning, and in sweeping up the fallen leaves of to-day the dead birds are being found in considerable numbers. We estimate that more than two hundred were killed.'"

Mr. E. H. Rodd writing to me from Penzance under the date of January 8, 1867, says, "I foresaw that there was hard weather somewhere, although the thermometer never showed a greater amount of frost than one degree, which was the lowest reading here; 60 miles to the eastward the reading was on Wednesday nine degrees above zero, and on Thursday only five: so much for our climate. The heavy weather to the eastward has driven millions of Linnets, Starlings, Larks, Redwings, Fieldfares, Peewits, and Golden Plovers to this district." As I was at the time on a visit to Lord Falmouth at Tregothnan, most of the facts mentioned by Mr. Rodd came under my own observation; and I may add that the destruction of these birds was immense; I myself saw lying dead on the frozen snow hundreds of Starlings, Song-Thrushes, Missel-Thrushes, Redwings and Fieldfares, but none of the Common Blackbird, and noticed that several of the weakly birds were attacked and eaten by the Rooks, which, themselves in an exhausted state, flocked round the house and at times even approached the drawing-room windows.

Violent and heavy gales also frequently lend their aid towards the destruction of bird-life, as evidenced by our shores being often found after their occurrence literally strewn with Guillemots, Razor-bills, and other sea-birds; in proof of which the following instances recorded in the 'Zoologist' for 1872 may be cited.

"After the severe storm of January" says Mr. H. Rogers (writing from the Isle of Wight) "our shores from Compton Bay to Watercombe Bay were lined with Razorbills, Guillemots &c. I had upwards of a hundred brought to me between the 25th and 31st, most of them in a very bad condition, which had evidently perished for want of food. Seven Gannets were also picked up and brought to

me; this I consider very remarkable: we do occasionally get a specimen in very hard winters; but for seven of these powerful birds to be driven dead upon our shores shows the severity of the storm."

Mr. Stephen Clogg, writing from Looe two days later (February 20), says, "The south-eastern shores of Cornwall have been covered with the dead bodies of various birds during the present month. In a walk of about a mile I numbered no less than sixty-nine dead bodies of Razorbills, in various stages of decay. This state of things extends for upwards of ten miles; and when we consider the great numbers that have been carried away for the purpose of making plumes for ladies' hats, and others that did not come ashore, I think we may safely conclude that thousands of the above-named species of birds have perished in this immediate neighbourhood within a fortnight; and if such has been the case in other parts of England how vast must have been the mortality amongst them!"

To the above instances Mr. Newman, the indefatigable editor of the 'Zoologist,' adds in a note, "This morning (February 21st) I met a man going over London Bridge with a clothes-basket full of Razorbills: he could not, or would not, tell me how he came by them; but by the blood on the plumage, I think they had come by a violent death."

Lastly disease, the greatest of all misfortunes, plays its sad part among birds as well as among quadrupeds and man. Grouse, as we all know, are frequently visited with great severity, and the sweeping hand of death is not satisfied until all but a remnant have succumbed to its ravages. Nature, in her wisdom, may cause all these various modes of destruction to take effect for some good end,—to check, perhaps, an inordinate increase of a particular species: quite certain it is that she never intended that five thousand Grouse should be bred on a Lancashire moor, or that a thousand Blue Hares should inhabit the crown of a single Scottish hill, as is often the case.

This unnatural over-crowding of the Grouse and Hares may have arisen in the case of the former from the extreme care and attention bestowed upon them, and, as regards the latter, from the killing down of the Golden Eagles and Foxes, of whose food the Blue Hare constitutes a large proportion, and upon the undue increase of which they were doubtless intended to afford a wholesome check.

"The jealous care," says Mr. Robert Gray, in his 'Birds of Western Scotland,' "with which this beautiful bird is protected appears of late years to have affected the wellbeing of the species;" and "I cannot withhold expressing a fear that the Red Grouse of Scotland, if not soon left to its own resources, may ultimately become a victim to overprotection. The great changes that have taken place within the last thirty years in the management of moorland tracts, and the excessive rents now derived from such properties, induced both land-owners and lessees to clear the ground of all kinds of animals that would prey upon those birds which are not strong enough to protect themselves; hence sickly broods of Grouse perpetuate other broods, that year by year degenerate, until disease ensues, and in some

instances almost depopulates an entire district. There can be no doubt that this unwarrantable destruction of Hawks and Buzzards affects adversely the condition of the birds with which our Scottish mountains are stocked—the number of wounded birds alone which survive the unprecedented annual slaughter through which the Red Grouse is now obliged to pass being an argument sufficient to show that such merciful agents are wanted to prevent the spread of enfeebled life. In other sections of the animal kingdom epidemics similar to that affecting Grouse have been noticed; and, so far as my own observations have enabled me to judge, I am disposed to regard these periodical outbreaks of disease as more or less associated with a derangement of Nature's laws. In almost every case where undue protection is given to certain animals by the rigorous destruction of others, man's interference is followed, sooner or later, by evils of a graver nature than those which the protective measures were intended to cure; and until some more rational plan is tried for the restoration of the Red Grouse to its original vigour, no one can say what may be the final issue of the somewhat anomalous position in which, as a species, the bird is now undoubtedly placed."

I can fully indorse the general remarks of Mr. Gray respecting the inconvenience arising from the undue protection afforded to certain species by the rigorous destruction of others. Strange as it may appear, the keeper who supposes that he is zealously guarding the interests of his employer by ruthlessly destroying all vermin from the estate is in some instances committing an error. As an example in point, and one not mentioned by the writer above quoted, I may remark upon the destruction of the White Owl, which, injuring the game to a very small extent, confers much compensatory benefit in the destruction of the mice, rats, and weasels upon which it feeds. Our pretty Kestrel, too, often suffers an ignominious fate without a reasonable excuse, its food generally consisting of moles, mice, lizards, frogs, and the larger insects. Considerable latitude must, however, be accorded to the keeper, who, with all his care and anxiety, is frequently nonplused by the continued loss of his young game, and that coming from a quarter little to be suspected. Some of the more intelligent of his class have, by constant watching, detected the Brown Owl habitually haunting the vicinity of his pens, and seizing, as occasion offered, two or three of his chicks. The Moorhen (*Gallinula chloropus*), too, stealthily threading its way through the grass, is no less to be dreaded, its presence among the coops not resulting solely in the abstraction of the scattered grain, but frequently in the death of a chick from a blow of its pointed bill, a considerable portion of the victim being afterwards eaten. No one who has lived much on the Thames, or other localities frequented by this bird, can have failed to be struck by the fury and boldness with which it will attack a rat, a duck, or even so large a bird as a swan, if it approaches its nest.

"At the beginning of July," says H. J. Partridge, Esq., of Hockham Hall, near Thetford, in Norfolk, "the keeper having lost several Pheasants about three weeks old from a copse, and having set traps

in vain for winged and four-footed vermin, determined to keep watch for the aggressor, when, after some time, a Moorhen was seen walking about near the copee. The keeper, supposing it only came to eat the young Pheasants' food, did not shoot it, until he saw the Moorhen strike a young Pheasant, which it killed immediately and devoured, except the leg- and wing-bones. The remains agreed exactly with eight found before. Perfect confidence may be placed in the correctness of this statement."—*Zoologist*, 1854, p. 4255.

For further evidence in proof of the correctness of these statements see my account of the Moorhen in the fourth volume.

In case what I have here and there said respecting the pugnacious and carnivorous propensities of the Moorhen should excite surprise, I may mention that they appear to be shared in common with all the other members of the group to which it belongs, from the delicately formed Rail to the most robust *Porphyrio*; and that they are all of a combative disposition is evidenced by possession of a sharp spur on the wing, short in some of the species, and prolonged in others.

The question has arisen whether, when we consider the present comparative scarcity of the Peregrine and other of their enemies, it will be really advisable to encourage the breeding of the marine or cliff birds, many persons being fearful that such a measure would lead to a great decrease in our edible fish, upon which they solely subsist. The daily quantity consumed by the Gannet and Cormorant, to say nothing of the Guillemots, Terns, &c., is greatly beyond conception, thus showing that both care and judgement is necessary with regard to the new laws about to be enacted.

Had a measure been passed fifty years ago and penalties enforced for killing the Great Auk and the few remaining Bustards that then stalked over our great plains, we should doubtless have still had these two fine birds gracing our islands; as it is, the former (*Alca impennis* or Gare Fowl) is wholly extirpated from the waters, not only of our own country, but of the universe; the Bustard still holds its own on the Continent, whence now and then in the course of a few years one strays over the seas, and visits the haunts of those of its kind which formerly existed here; its permanent residence again among us, however, is rendered impossible by the gradual disappearance under cultivation of the vast plains and wolds over which it roamed, whereby they have been rendered incompatible with its existence. The Capercaillie, which probably died out from natural causes, was wholly absent for a hundred years, but owing to the replanting of pine-forests, the conditions favourable to its welfare are returning, and a fresh introduction has reinstated it. Other birds, such as the Crane, Spoonbill, Bittern, Avocet, and the Ruff, which were once very common, have now, owing to the draining of our fens and marshes, no resting-places where they could dwell in peace and unmolested. Thus it will be seen that by man's industry in effecting improvements certain natural productions are greatly interfered with.

With regard to the exact enumeration of the birds frequenting the British Islands there must always be considerable difficulties,

inasmuch as many persons would hesitate to include in our lists such species as have from time to time strayed over from America, or others which we may reasonably suppose to have escaped from confinement. With these difficulties in view I have restricted the additions to our list of native birds, with only a few exceptions, to those species pertaining to the fauna of the Old World which, without constantly residing in our islands, have from time to time appeared therein, and whose visits oft repeated may ultimately entitle them to a permanent place in our lists. I may state with tolerable accuracy that the total number of our species is about three hundred and fifty.

If the supposed number of birds inhabiting the globe be about 10,000, it must be admitted that the British Islands have their due proportion of them; of course it would be quite out of place to institute a comparison between our country, or even the whole temperate region of either hemisphere, and the tropics, where bird-life is so redundant, in accordance with the profusion of fruits and insects upon which they mainly subsist.

It must be conceded by every one who has paid attention to general ornithology, that very considerable difficulties exist in the formation of a perfect scientific arrangement of the Birds of the British Islands, since these are but an appendage of a vast tract embracing the two continents of Europe and Asia, sections of the world assimilating in their bird-life, not only as regards genera, but in many instances also with respect to species. Hence in our own lists there will be occasionally breaks, as it were, that would be filled up by forms which, while found not far distant from us, still have never been actually killed in our islands. Far wider gaps will of necessity occur through the absence of such genera as are peculiar to Australia—the Bower-, Lyre-, and Mound-raising birds, or of those which are confined exclusively to the New World—Toucans, Trogons, Humming-birds, &c.

Man has frequently been induced to try his hand at the introduction of certain species the acquisition of which he has considered desirable; such attempts have generally proved futile; Nature having adapted each for a certain locality, the climate and the condition of the country must be altered and rendered fit for the reception of either bird or quadruped before there is the slightest chance of their successful naturalization. Many persons have been desirous of establishing the North-American Prairie-hen (*Cupidonia cupido*) on our moors, and the *Ortyx virginianus* or American Partridge in our fields and coverts; but what good would be effected thereby? The Prairie-hen would but displace a better bird, the common Grouse; and the little Partridge would be no improvement upon our familiar species. There is no fear, however, that this will ever be accomplished; and the sooner such fallacies are ended the better. It would be far wiser were the efforts of our well-meaning patrons of acclimatization directed rather to that interchange of blood among the same species which is essential to the maintenance of a healthy stock. I am

it is all-important with regard to our birds, particularly those that are stationary. It is well known that species which have lived long on an island without a sufficient interchange will diminish both in size and brilliancy of tints; and hence, perhaps, may be explained the smaller size and more subdued colouring of many of our birds, compared with continental examples. The Blackcock of Norway and Switzerland will be found to have the tone of its plumage more intensified than those inhabiting Scotland, the black being unmistakably of a darker hue, and the gloss of the feathers more resplendent. The Norwegian Ptarmigan, too, is of a purer white compared with our own bird, while its full summer dress is much darker. So, again, the Longtailed Tit (*Mecistura caudata*) of Norway and Denmark differs in having a white head, while that of Great Britain has the crown and face dark or obscurely striped; and the Cole Tit (*Parus ater*) of Belgium in having the back grey, instead of the slight olive tint seen in British examples. To make such differences, however, grounds for specific distinction, as has in some cases been done, is in my opinion playing with science. That the drier and more rarified air of the Continent, coupled with the more direct influence of the solar rays, contributes to cause these slight differences, seems to me highly probable; and I am strengthened in this view by noting that among such groups as the *Trochilidæ*, or Humming-birds of America, some of the richest and finest colours are seen in species that frequent lofty situations.

Most of the Pheasants now spread over every county of the British islands are mongrels, brought about by the interbreeding of three kinds, and their progeny are but too often rickety and sickly creatures. Those of our sportsmen who have flushed a true *Phasianus torquatus* in England, or killed the same bird in China, its native country, must have been astonished at the quickness of its arrow-like flight, and the wildness of its actions.

The scientific naturalist of course repudiates all varieties such as the Pheasants alluded to, no two of which are alike in colour or markings, and whose promiscuous interbreeding can lead to no important result. We see this intercrossing carried to a still greater extent in our domesticated Pigeons and Fowls; but beyond the acquisition of certain variations in plumage, or of qualities rendering them more highly esteemed for the table, nothing of interest is attained.

Whilst on the subject of interbreeding I should wish to draw the attention of sportsmen to the advantages likely to accrue from the interbreeding of our Grouse with that of Norway (*Tetrao saliceti*). Ornithologists are questioning whether these are not one and the same species, and if the differences existing between the two may not be due to the influence of climate. Should such be the case (and I think it probable), then the introduction of the original stock would doubtless effect an improvement in the health and vigour of our birds. Prof. Rasch, of Christiania, believes the two so-called species to be identical, and is introducing our Grouse into his country, partly to determine this point, and partly for the sake of the infusion of fresh

blood; but more on this subject will be found in my account of the Red Grouse. As bearing upon their unity, I may mention that I made a journey to Norway for the sole purpose of studying the habits of *Tetrao saliceti*, and observed that they differed in little or no respect from those of our Grouse, and that its crow was also similar.

Mr. Robert Gray remarks that, as a rule, all the Grouse from Lewis, Harris, North and South Uist, Barra, &c. "may be said to be smaller and lighter in colour than those from moors on the mainland, especially the mountain-ranges of the north-east of Scotland, which invariably yield in good seasons the largest and most beautifully marked birds. In many districts the native Grouse partake of the coloration of the ground in their markings: thus the finest and darkest birds are those frequenting rich heathy tracts; while on broken ground of a rocky character, such as may be seen in Wigtownshire, the grouse are either more or less mottled, or are altogether lighter in colour, and less in size and weight."

Before closing my remarks on the *Tetrao saliceti* and the English Grouse, it may be interesting to note that the extent of the southern range of the former, whether we look at it in Norway, Sweden, or Russia, is restricted to much about the same degree of southern latitude as that of our own bird in England and Wales, thus adding one more indirect proof of their probable identity. On the other hand the Blackcock and Ptarmigan have a more extended southern range, both being found in Switzerland, if not in Northern Italy.

Although in a previous page I have discountenanced the introduction of new species, I may be here permitted to make an exception by advocating the claims of the Gelinotte or Hazel-Grouse (*Bonasa betulina*) to a trial of acclimatization in this country. Without putting forth this suggestion as original, I may state that having seen much of this excellent bird in Norway and other parts of Europe, and noticed that it there dwells in woods very similar to those which occur in Kent and other counties of England and Scotland, I see no reason why it should not be successfully naturalized; and I would suggest that those who are of the same opinion and have the means of making the experiment should do so.

"It is to me a mystery," says Mr. Lloyd, in his 'Game-birds and Wild Fowl of Sweden and Norway,' "why the Hazel-Hen, which, from its English name, would almost seem to have been a former inhabitant of the British Isles, has not been naturalized with us, inasmuch as it is, of all game-birds, the most delicious, of consummate beauty, and of unconquerable hardihood, 'and adapted, moreover,' according to Mr. George Chichester Oxenden, who has seen and shot these birds in most European countries, 'to every variety of cover, from pine-forests to hazel- and oak-copses.' But it is not too late in the day for the Acclimatization Society to take the Hazel-Hen in hand; and if the localities were suitable for the purpose (and such there are, no doubt, in England and Scotland), and the attempt were made with from twenty to fifty brace of these birds, I see no reason why it should not succeed."

That the introduction of the Pheasant, the Guinea-fowl, and the Turkey has been to a certain extent successful must be admitted; but it is to a certain extent only; for it is believed by competent authorities that the Pheasant if left to itself would die out in thirty years, and the Guinea-fowl and Turkey in a much shorter time. Nurses, feeders, and watchers are absolutely necessary for the preservation of these three birds, just as the safety and health of the Elands in Lord Hill's Park, at Hawkstone, are dependent upon the keeper who feeds and nightly shelters them during inclement seasons.

Had I not had ample experience on the subject of naturalization, I should not have prolonged these remarks; but having for the last forty years been a close observer of the denizens of the Gardens of the Zoological Society of London, a Society justly popular for its interest and usefulness, I have not failed to note that however high our hopes may have been raised respecting the probability of the successful introduction of many valuable species, nothing but bitter disappointment has been the result. Two or three instances will suffice. Soon after the arrival of the beautiful Mandarin Ducks they commenced laying, and hatched out several clutches of young; it was therefore only natural to infer that this lovely denizen of the Celestial Empire would hereafter grace our ponds and lakes; but such has not been the case, and very sparingly indeed does the bird breed after the second or third year of its introduction. Three species of the equally beautiful *Cerionithes*, or so-called Horned Pheasants, have at one time or other also graced the gardens, and gave early evidence that they would reproduce their kinds; and many of them did so; but, alas! the same result followed; for in a very few years all, both old and young, sickened and died. A like fate attended the fine Crossoptilons: they laid freely, and a numerous progeny were raised during the first two or three years; but they ultimately all perished; and thus these fine and rare members of the *Phasianidæ*, which formed unrivalled ornaments to the Gardens in 1870, were, in 1872, not to be seen. Many other instances might be cited in support of this view of the impossibility of naturalizing a foreign species. Nature, as a rule, places each species in the locality best adapted to it; and its removal to any other is pretty certain to end in failure. The attempts at introduction of these and other birds by such a society as the Zoological, however, have this good end—that they enable the public and the scientific ornithologist to view in a living state objects of which otherwise they could only inspect the dried skins, and, when they breed, to make themselves acquainted with the colour and markings of their eggs, the downy state of their young, and the changes of plumage they undergo until they attain that of the adult. Still it is to be regretted that their existence is not further prolonged.

Each season of the year possesses its peculiar attractions; but spring has especial claims upon our notice. The sun, awakened from his winter lethargy, ushers in this delightful season with his genial warmth; and all nature greets with joy the presage of coming summer, and its many pleasing and interesting associations. The

smaller birds are now prompted to exercise their vocal powers, filling the woods and hedge-rows with their joyous harmony; and preparations for pairing forecast the breeding-season. The Grouse tribe resort to their "lek-stalles*," the Ruffs to their hillocks; the Rooks return to their ancestral elms, and the Daws to the nooks and crannies of the castellated tower.

It is at this particular season that birds assume their gayest colours, and oftentimes appear in accessory plumes. The Peacock now spreads his magnificent train to the greatest advantage, the Ruffs display their curious neck-plumes, the Grebes their tippets, and the Egret its flowing back-feathers. In short, every species is now arrayed in its newest and most showy dress. Pairing having been accomplished, each species sets about the serious responsibilities implied in the propagation of its kind. Some, during this season, delight to nest in company, as seen in our own familiar Rook, which will occupy in immense numbers the lofty trees of many a noble avenue, returning, year after year, for centuries, to the same spot. Such places, again, as Ailsa Craig, Handa, and Flamborough Head attract myriads of cliff-haunting species, which evince a similar tendency to reproduce in colonies. Few more wonderful sights can be seen during the month of June than the precipitous face of one of these places, say Handa. Viewed from the sea, there may be descried tier upon tier of Guillemots and Razor-bills, &c., almost jostling one another, from the manner in which they are closely packed. Each species constitutes a separate community, and strictly confines itself to its own ledges. The Cormorants and Gulls have also their selected situations. Far above all, in their curious rabbit-like burrows, in the sandy earth covering the summit, congregate those oddest of all birds, the Puffins. The din and noise of such an assemblage is indescribable, and, when a gun is fired, almost unendurable; while the circling, swooping flight of the countless myriads thus disturbed communicates the sensation of complete bewilderment. Usually among these great gatherings will breed a pair of some raptorial bird, such as the Peregrine, or more rarely the White-tailed Eagle, while in some of the more southern cliffs the Chough nestles, and adds its cackling cry to the universal hubbub. The Common Heron, again, is a bird nesting in communities, choosing, as a rule, large pine-woods,—notable examples being the celebrated heronry on the property of Sir George Musgrave, Bart., at Eden Hall, in Cumberland, which comprises about one hundred nests, and that on the estate of W. Amhurst T. Amhurst, Esq., at Didlington Park, in Norfolk. Other and most interesting colonies of birds are to be seen, such as those of the Black-headed Gulls, in various counties, particularly at Scoulton and other meres in Norfolk.

With respect to the receptacles for their eggs when laid, birds offer

* Lek and lek-ställe are Norwegian terms, applied to localities "where affairs matrimonial are carried on." We find them frequently used by Mr. Lloyd in his 'Game-birds and Wild Fowl of Sweden and Norway,' when alluding to the courting assemblies of the Capercaillie, Blackcock, Snipe, &c.

many interesting peculiarities. Some will content themselves with the bare ledge of a rock, the pyriform shape of their eggs being the only safe-guard against their falling over the precipice; others deposit their eggs on a mass of sea-weed or in a floating nest composed of rotten aquatic plants, as is the case with the Grebes. Where a more ambitious structure is erected, we find every degree of complication, from the loosely built platform of the Wood-Pigeon to the elegant lichen-crustured nest of the Long-tailed Tit. Each species shows in its nesting a most perfect adaptation to the exigences of the situation. Where, like the nest of the Sedge Warblers, it is swayed to and fro amidst the reeds by every passing wind, the deep purse-like shape of the interior is a safe provision against the eggs being blown out; under our eaves the homely Martin plasters its nest of mud; the Goldcrest hangs its hammock-like cradle beneath the tip of a pendent fir bough; and in holes of trees and walls the Tits delight to construct their felted nests.

I should fatigue my readers and exceed the latitude allowed me in this introduction, were I to dwell longer upon the situations affected by various species in their nidification or the wondrous forms shown in the construction of their homes; otherwise I might dilate upon the ingenuity displayed in the dome-like nests of the Magpie, in the approach to that shape seen in those of the common House-Sparrow when built in trees, or in the fish-bone floor of the Kingfisher's retreat; but all these will be found more fully dwelt upon in the descriptions attached to the representation of each species in the body of the work; I may, however, remark in passing that the structural skill displayed by many of our birds is far surpassed by that of certain foreign species; and we are struck with astonishment when we gaze upon such nests as those of the Tailorbird, the Sociable Grosbeak, the Weaverbird, the *Icteri* or Hang-nests.

In writing upon subjects connected with ornithology I find the associations of my boyhood ever flitting before me. Well can I recollect the dried body of the brightly coloured Kingfisher hanging from the cottager's ceiling, and supposed by its movements to point the direction of the wind*—a superstition now, like many others, happily abandoned. We'll do I recollect also the particoloured strings of eggs with which I and my companions delighted to festoon the walls, and which were rigorously destroyed in our games, before the termination of the year, in order to ward off the ill-luck otherwise supposed to ensue. I can still remember with what intense admiration I was filled in gazing upon the nest and lovely blue eggs of the common Hedge-Sparrow, and the pride I had in consigning them, when blown and thus bereft of half their beauty, to that string which was to hold so many of my subsequent findings. Coequally with the spread of natural history generally, has advanced the interest felt in the collecting of eggs—so much so that even amongst school-boys they now find their way into carefully appointed cabinets, in place

* "But now stands the wind?
Into what corner peers my halcyon's bill?"

MARLOWE'S *Jew of Malta*,

of being used only as the plaything of an hour. The study of Oology at the present day may fairly claim an important place amongst the sciences; and, to speak more specially on the subject, I could name several men, whose studies have taken this direction, who follow their taste with such ardour that neither distance nor expense suffice to deter them. One of the most enthusiastic of these was the late Mr. John Wolley, who immured himself in the heart of Lapland for two or three winters for the sole purpose of being sufficiently early on the breeding-grounds to procure such rare eggs as those of the Gyrfalcon, Pine-Grosbeak, Waxen Chatterer, and Smew. To enhance still further the interest attaching to the study of Oology, I have only to refer to the beautiful form, colour, and markings of most eggs, and to the difference in the number that are laid by various species. The Common Guillemot and the Razorbill lay but one, and that very large in comparison with the bird; on the other hand the Grouse will lay nearly a dozen; the Swift lays invariably two, and the Swallow four, while some of our Tits deposit from twelve to fourteen. Those eggs which are white are frequently placed in dark situations; but this is by no means a constant rule, since in the case of the Wood-Pigeon and Turtle-Dove the eggs are not only fully exposed to light, but owing to the slight structure of the nest, may be frequently descried through it. Their allies the Stock-Dove and Rock-Pigeon, however, lay theirs in the dark, as does also the Wry-neck, all three having white eggs. On the other hand the Nuthatch, Creeper, and many of the Tits, producing speckled eggs, deposit them in holes of trees and other places inaccessible to the light of day.

From the egg to the chick is a natural sequence; and here commences a stage in the life of birds which has been regarded by myself with more than ordinary interest. If any one feature in my illustrations to the 'Birds of Great Britain' has special claims to originality, it is the representation of the young or infantine state of many of the species; and this, I trust, will be duly appreciated by those who possess the work. In the imagination of most people young birds are blind, callow, helpless creatures, depending in every way on the fostering care of their parents, and instinctively opening their gaping bills to receive the food assiduously brought to them. Such a helpless condition as this undoubtedly prevails amongst the young of nearly all, if not all, the *Insessorial* birds; but compare these with those of other forms, and what vast differences are seen! The tiny offspring of the Grebe, emerging from its bursting shell in all the vigour and activity of a fully organized being, is immediately capable of clambering, should danger approach, upon its mother's back, or of seeking security and concealment by diving under a floating leaf. Who is not familiar with the Duckling, which, from birth, equals, if it does not surpass, its parents in the quickness of its movements, and in the skill with which it darts over the surface of the water in pursuit of flies or other insects? As a means to an end (that of continuing its existence unaided), the young Duck is as perfect as the old bird, though destitute of the power of flight,

to be accorded to it hereafter. What the webbed feet and swimming-capabilities are to the immature birds above mentioned, the organs of flight are to the chick of the Gelinotte or Hazel-Hen, which, within a day of its exit from the shell, is endowed with such a development of its primaries and secondaries, that it can fly from branch to branch, or dart after its parents through the wood, with an ease and rapidity equal to that of any other little bird. At this early stage the Gelinotte appears all wings, and, from the down which alone covers its body, presents somewhat the appearance of a gigantic moth. The young of the Heron exhibit a very low degree of perfection; but those of the Crane, the Bustard, and the Plover are agile on exclusion. The colouring of the downy stage of young birds is, in many instances, very beautiful, and fantastic indeed in form—exhibiting itself in stripings amongst the Grebes, yellow moss-like marblings amongst the true Plovers, paintings on the face of the Coot, and tortoiseshell blotches on the Black-headed Gull. This peculiar phase in bird-life exists but for a short period—six or eight days; a change then takes place, in the course of which the downy dress, with all its pretty markings, is thrown or, rather, pushed off by a succession of real feathers. In the Starling, among the Insessorial birds, it is exchanged for a uniform coat of brown, which, before the summer is over, is again transformed into a spangled dress of great beauty. In the Golden Plover the moss-like marbling is exchanged for a yellow speckled plumage; the Grebe loses its dorsal stripes, and assumes a silken white breast; the young Coot, deprived of its painted face, soon presents an approach to the colouring of its parent; the grey middle dress of the young Heron gradually merges into that of the adult; and the newly hatched Falcons, which are blind, white-down-covered, sprawling creatures, pass through a variety of changes between their birth and the commencement of the second year of their existence, when they attain their perfect adult plumage, never again to be altered. Changes of a similar description also occur among the Owls. Many, if not most, birds, in fact, undergo a succession of alterations in their costume between birth and maturity; but as there is no rule without an exception, so there are some birds which are not subject to any great change of this kind: for instance, the Kingfisher from the first is nearly as fine in colour as when adult, as are also the Roller, the Waxen Chatterer, the Tree-creeper, and the Nuthatch.

In the foregoing passages I have described some of the remarkable changes which birds undergo between youth and maturity; but however interesting and curious may be the details of their infantine states, their progress through middle life is not less so—while the culminating point, so far as costume is concerned, has not yet been reached; for, wonderful as are the phases through which they have progressed, these are as nothing compared with the assumption of the richer dress and colouring that obtains at the pairing-season. The transformations that take place in the Plovers and many other species at this period are indeed most remarkable, and, I believe, little

known to any but ornithologists. The white breasts of the Golden and Grey Plovers now become of a jetty black, and the same part of the Godwits of a rusty red; the Lesser Gulls assume hoods of brown, and the Terns caps of glossy black, presenting a striking contrast to their coral-red feet; the Divers doff their brown dress for a chequered one of black and white; the Sparrow acquires a black bill, the Chaffinch and the Hawfinch blue ones; and the whole are now decked for their summer duties, after the performance of which they again resume the garb of winter, and retain it until the following spring.

Of the myriads of created beings which adorn our globe, birds must necessarily rank highly in the estimation of man, and be to him at all times objects of the greatest interest, inasmuch as they not only contribute in a hundred ways to his delight, but many of them to his sustenance. The buoyant Eagle, soaring in aerial evolutions towards the sun, elicits his admiration; and the rapid stoop of the Falcon excites his wonder. The Owl, which with noiseless flight crosses his path during its nocturnal prowlings, induces his surprise at the readiness with which it discerns the agile mouse and other small quadrupeds among the grass. If the fields attract him to roam in the day-time, the Lark and the Corn-Bunting are his companions; and he hears the voice of the Yaffle, proclaiming the approach of rain. If in the woods he is induced to stroll, the coo of the Pigeon strikes his ear, or the tapping of the Woodpecker arrests his attention, the songs of the Thrush, the Ouzel, the Blackcap, and other sylvan birds, with the Nightingale at their head, afford food to his mind and sweet music to his ear; the Crows, the Rooks and the Daws attract his notice; and he does not fail to observe the difference in their cries, actions, and economies. In the neighbourhood of streams the bright meteor-like flash of the Kingfisher, the heavy flutter of the Moorhen, and the skimming flight of the Summer Snipe induce him to note how differently birds pass through the air, and to contrast the comparatively slow movements of the latter with the sweeping flight of the Swift, which nearly outstrips the wind. On the shores of the ocean a flood of new objects meet his gaze—the fairy-like Tern, the more robust Gulls, with Cormorants and many other aquatic species. In the marsh he hears the Snipe drum, the Bittern boom, and the plainly coloured Reed Warblers pour forth a succession of querulous sounds when intruded upon. While enjoying the invigorating air of the downs, though now deprived of the pleasure of seeing the stately Bustard, perchance his attention is arrested by the trippings of the Dottrel; the Stone-Plover may rise at his feet, and wing its way over the hill to a place of security; or the Wheatear and the Furze-Chat may attract his notice, the former by the whiteness of its rump, and the latter by being perched on the very top of a furze-bush; and if it be autumn, the heavy, flapping flight of the Pewit will show him that its structure is not so well adapted for passing through the air as that of the sharp-winged Golden Plover.

In studying the denizens of our inland waters other opportunities for drawing a comparison will present themselves; he will not fail

to remark the wondrous principle of adaptation, which enables the frightened Grebe after its plunge to progress with the aid of its wings as rapidly beneath the surface as the Coot with drooping legs over it. Instances almost without end of the delight which the study of birds affords might be cited; but I will now say a few words on their uses as articles of diet.

As a rule, birds are far less utilized in this country than on the Continent, where even the smallest are eaten, the Robin, the Wry-neck, and the Wren not excepted, as a visit to the markets of Paris and Rome will testify, the sylvan Beccaficos and the Ortolans being specially regarded as *bonnes bouches*.

Among the water-birds, the Scoters and other diving ducks, being regarded as partly fish and partly fowl, are allowed to be eaten on fast days, and are therefore in great request; and Mr. Augustus Smith of Scilly tells me that the French sailors who land on those islands frequently ask his permission to kill Cormorants and Shags, considering them, as they do, the best of fowl. The Gannet is largely eaten in the northern parts of the kingdom, while the Fulmar not only forms the principal diet of the St.-Kildan, but its feathers constitute his bed, and its oil furnishes him with medicine and the means of light. The late Mr. John Macgillivray states that the eggs "are much esteemed by the natives, who gratify their partiality by robbing all the nests in the month of May, and apparently trust to the bird laying a second time;" and, adds Mr. Robert Gray, "the young is valued more than all the other tribes of birds taken together; it may be said to be their staff of life. The 12th of August, if a notable day on the moors, is more so on the rocks of St. Kilda; for it is the harvest of the people, who are aware that it will only last eight days; and therefore sleep itself is banished for this space, seeing that the millions that may be left on the eighth day after the 12th are sure to be off to their own fairy world for a season. The number killed in this one week may be from *eighteen to twenty thousand*." In a valuable paper on the Solan Goose or Gannet by Dr. R. O. Cunningham, published in 'The Ibis' for 1866, it is stated, on the authority of the celebrated Harvey, that "the young, when they attain the magnitude of the domestic Goose, are sweet and fit for eating; but the flesh of the old birds is hard, lean, and dry." And Ray in his 'Itineraries' mentions that "the young ones are esteemed a choice dish in Scotland. As the bird feeds upon mackrel and herring, the flesh of the young smells and tastes strong of these fish."

At the present time, according to Dr. Cunningham, "from one to two thousand of the young birds are killed annually for sale, and after being plucked obtain a price of from sixpence to a shilling each; at one time they figured at the tables of the Scottish monarchs, and more recently were esteemed by the citizens of Edinburgh and other towns, being roasted and eaten as a relish before dinner. Now I believe their consumption is chiefly limited to the lower classes; and I have been informed on good authority that, after being parboiled and having had their legs cut off, they are sold in considerable numbers to the Irish peasants who come over to Scotland at harvest time."

It is quite impossible to give an estimate of the numbers of wild Ducks and Geese that are yearly consumed in the three kingdoms; but that they are immense will be readily conceived when it is stated that from the various decoys, and from the Continent, hundreds, if not thousands, are weekly sent to the markets of the metropolis and other large towns, to which the professed wild-fowl shooter also transmits his quota of Wigeons, Pochards, and Brent Geese. The Common Pewit and the Golden Plover are largely consumed, as are also the Stints and other strand-loving birds. The supply of Snipes and Woodcocks is dependent in a great measure upon the nature of the season, as is also, to a certain extent, that of the Wood-Pigeon, the Partridge, the Grouse, the Pheasant and other game-birds. The Dotrel, which passes over our islands from south to north during the month of May, is subjected to a large annual toll, and, with the imported and fattened Quail and the Ortolans, forms delicate viands for the tables of the wealthy and of the epicures who require such whets for their appetites, and who can afford their purchase. Besides the species above mentioned, many other kinds, and even the eggs of several, are diligently sought for; those of the Lapwing, Black-headed Gulls, and Guillemots, especially the former, being in great request. These remarks may appear trite, but they serve to show that many of our birds are extensively utilized.

Much has been written upon the classification, general structure, power of flight, and senses of birds; but were I to go into detail on these matters I should only be reproducing what has been so ably treated by such men as Macgillivray, Owen, Jerdon, Flower, Huxley, Parker, and others. I cannot, however, conclude the present introduction without touching lightly on some of these points.

Most writers on Natural History have placed the class *Aves* immediately above the Reptiles and below the Mammals, from either of which they are clearly separated by the distinctive characteristics shown in their general form, habits, feathered covering, and powers of flight. It is in regard to some of these that I would now wish to say a few words. All those who have studied the anatomy of birds, even but cursorily, must have become specially aware of the wonderful adaptation shown by nature in fashioning the skeleton so as to enable the creature to support itself in the air with the least possible exertion, and propel its body with varying degrees of swiftness through that element; they will have noticed that this power of flight is aided to a considerable extent by the fact of the bones being hollow, and their cavities communicating for the most part with the cells of the lungs—a provision ensuring the maximum of strength with the minimum of weight.

The wings of birds modify in various ways the velocity with which they are capable of cleaving the air. Some, like the Land-Rail and the Bittern, with rounded wings, evince considerable reluctance to quit the ground, and, when they do so, merely fly to a short distance; others, such as the Auks and Penguins, have, indeed, but the rudiments of those organs; while others, again, have their wings and pectoral muscles developed to such an extent that extraordinary

rates of velocity and distances traversed have been recorded. Thus Mr. Charles Boner states, in his 'Forest Creatures,' that the flight of the Eagle is sixty feet per second, being at the rate of somewhat more than forty miles per hour; and my friend W. White Cooper mentions, in his 'Zoological Notes and Anecdotes,' that "the flight of a Hawk is calculated at one hundred and fifty miles an hour; and the anecdote of the Falcon belonging to Henry IV. of France, which flew, in one day, from Fontainebleau to Malta, a distance of thirteen hundred and fifty miles, is well authenticated."

Mr. Harting, in his interesting 'Ornithology of Shakespeare,' mentions that the flight of the Common Swallow (*Hirundo rustica*) has been computed to be at the rate of ninety miles an hour. If this be a just computation, that of the Alpine Swift must be twice as great; but these are as nothing when compared with the velocity of the Frigate-bird (*Tachypetes aquilus*), which, says Audubon, "is possessed of a power of flight I conceive superior to that of perhaps any other bird. However swiftly the Cayenne Tern, the smaller Gulls, or the Jager move on the wing, it seems a matter of mere sport to it to overtake any of them."

"There are two facts observable in all birds of great and long-sustained powers of flight," remarks the Duke of Argyll, in his admirable 'Reign of Law:' "the first is that they are always provided with wings which are rather long than broad, and sometimes extremely narrow in proportion to their length; the second is that the wings are always sharply pointed at the ends. Let us look at the mechanical laws which absolutely require this structure for the purpose of powerful flight, and to meet which it has accordingly been devised and provided. One law appealed to in making wings rather long than broad is simply the law of leverage and a long wing is nothing but a long lever. The mechanical principle or law, as is well known, is this:—that a very small amount of motion (or motion through a very small space) at the short end of a lever, produces a great amount of motion (through a long space) at the opposite or longer end. This action requires, indeed, a very intense force to be applied at the shorter end; but it applies that force with immense advantage for the purpose in view, because the motion which is transmitted to the end of a long wing is a motion acting at that point through a long space, and is therefore equivalent to a very heavy weight lifted through a short space at the end which is attached to the body of the bird. Now, this is precisely what is required for the purpose of flight." The preceding extract is sufficient for my present purpose; but my readers will find many other interesting remarks, on the laws affecting and governing the flight of birds, in the work above mentioned, to which I would earnestly direct their attention.

Birds, like other animals, are endowed with the usual senses; but these vary in degree of perfection in accordance with the variety in their habits. That that of sight is very highly developed is amply testified in the Kestrel, whose eyes must be almost telescopic to enable it to see an insect or a mouse on the ground from the great

elevation at which it usually hovers; the familiar Robin, who discovers the wriggling worm at a distance of many yards, must also be endowed with acute powers of vision; nor can it be less perfect in the Shrike, who sallies fourth from his chosen branch to secure with unerring aim the passing fly or beetle. The Vulture, provided with organs of equal if not even greater power, descries from an enormous distance a dying camel, a stranded sheep or any other earthly creature which has met with misfortune, and by his peculiar motions gives the cue to others of its kind from still greater distances and various points of the compass; for "wheresoever the carcase is, there will the Eagles be gathered together."

The sense of smell is most acute in the *Anatidæ* or Duck tribe, but according to my experience seems to be entirely wanting in the Raptures, Vultures, Eagles, &c.

That of hearing would appear to be most perfect in the Owls, as testified by their highly developed auditory conch; at the same time it is by no means wanting in many other families of birds.

Neither can the sense of feeling be absent from the probing bill of the Woodcock and the members of the *Scolopacidæ* generally.

Should any of my readers wish to enrich their knowledge in this direction, I must refer them to the works of the writers mentioned above. In 'The Birds of Great Britain' my chief aim has been to give a faithful representation of the various species, and to record, in addition to the notes of others, such observations as my lengthened study in this branch of science has enabled me to make.

The following arrangement will give a general view of 'The Birds of Great Britain,' with some additional information respecting them obtained during the progress of the work, and notices of those species which have occurred in the British Islands but which are not, in my opinion, entitled to a place in our fauna and consequently have not been figured.

ORDER RAPTORES.

Family VULTURIDÆ.

The Vultures, a family of birds whose proper home is the warmer countries of the world, are but feebly represented in the British Islands, where, indeed, the appearance of the two species which have occurred therein must be regarded as purely accidental, our islands being fortunately exempt from those visitations which render the presence of these useful scavengers a matter of great importance. The family comprises about twenty-four species, divided among ten or twelve genera, the greater part of which inhabit Eastern Europe, Africa, and India; the remainder frequent America, and extend their range from the United States to Chile.

Genus NEOPHRON.

1. NEOPHRON PERCNOPTERUS Vol. I. Pl. I.
EGYPTIAN VULTURE.

We have very positive evidence that this bird has been killed in Somersetshire and Essex, of which occurrences the particulars will be found in my account of the species.

Genus GYPS.

2. GYPS FULVUS.
Griffon Vulture.

This bird has still less claim to a place in the British Fauna than the Egyptian Vulture, I have therefore not given a plate of it, notwithstanding that its occurrence has been recorded by Thompson, and that Yarrell has figured it from a specimen "caught by a youth on the rocks near Cork harbour in the spring of 1843. The bird was full grown; the plumage perfect, without any of the appearances consequent on confinement; it was very wild and savage, and was in perfect health."

This Vulture is of large size and proportionate strength, possesses great sustaining powers of flight, and enjoys a widely extended geographical range, being found in Germany, France, on the Pyrenees, in Spain. It also occurs in the Grecian archipelago, Candia, Egypt and other parts of North Africa; and Dr. Jerdon states that it also inhabits Western Asia and the Himalaya Mountains. It makes a large nest, 3 or 4 feet in diameter, on rocks and high trees, and lays two, or sometimes three, elongated white eggs nearly as large as those of a Goose.

Family FALCONIDÆ.

Subfamily AQUILINÆ.

Eagles are very generally spread over the temperate and warmer portions of the globe. Four species frequent the British Islands—namely, two of the genus *Aquila*, one of *Haliaëtus*, and a *Pandion*.

Genus AQUILA.

3. AQUILA CHRYSÆTOS Vol. I. Pl. II.
GOLDEN EAGLE.

A bird of the northern portion of Britain, where it still breeds, as it formerly did in Derbyshire, as it is also said to have done in North Wales. The young are apt to wander southwards; and hence we occasionally see immature examples in England, but seldom adults.

4. AQUILA NÆVIA Vol. I. Pl. III.
SPOTTED EAGLE.

The native home of this bird is the eastern portions of Europe.

North Africa, and India. To England its visits are purely accidental; yet it has been killed therein six or seven times—namely, once in Hampshire, twice in Cornwall, and thrice in Ireland.

When mentioning in my account of this species that the second Cornish example, killed near Carnanton, is now in the Truro Museum, I ought to have added “to which institution it was presented by E. Brydges Willyams, Esq.”—an omission which I now rectify.

Genus HALIAËTUS.

5. HALIAËTUS ALBICILLA Vol. I. Pl. IV.
SEA-EAGLE.

Inhabits Greenland, Europe, and North Africa. More maritime in its habits than the Golden Eagle. Breeds in the north. Feeds on fish and garbage of any kind thrown up by the sea.

Since my account of the Sea-Eagle was printed, Captain Elwes has published, in ‘The Ibis’ for 1869, an interesting paper on the “Bird-Stations of the Outer Hebrides.”

Speaking of the Spiant Isles, “a small group lying in the Minch, about six miles from the coast of Lewis,” he says: “There is a celebrated eyry of the White-tailed Eagle (*Haliaëtus albicilla*) here, which has been used from time immemorial and is mentioned by Martin, who wrote nearly two hundred years ago. I think it is as perfectly inaccessible as any nest can be, owing to the way in which the rock overhangs, and, if the birds are not destroyed, will remain in use for centuries.”

Genus PANDION.

6. PANDION HALIAËTUS Vol. I. Pl. V.
OSPREY.

Formerly common in Scotland, where on most of the ruined castles in the neighbourhood, and on the islands in the lochs, its eyry might have been found; now it has become scarce, and, unless it be protected, will soon be extirpated. If, as has been supposed, there is but one species of this form, then it may be said to be almost universally distributed over the other parts of the Old World, as it also is in the greater part of the New. Lives almost wholly on fish. Is a summer visitant, arriving at its breeding-places in the spring, and departs southward in autumn.

Subfamily BUTEONINÆ.

Buzzards are found in nearly every country of the globe. The fauna of Europe comprises three or four species, all of which have been killed in Britain; but of these one has but slender claims to be enumerated among the birds of our islands.

Genus BUTEO.

7. BUTEO VULGARIS Vol. I. PL. VI.
COMMON BUZZARD.

Formerly very common in many of our counties; it still breeds in some of them, particularly in certain parts of Kent.

8. BUTEO DESERTORUM Vol. I. PL. VII.

Falco desertorum, Daud. *Traité d'Orn.* tom. ii. p. 162.

— *cirtensis*, Levaill.

— *vulpinus*, Licht.

— *capensis*, part., Schleg.

— *tachardus*, Bree, *Birds of Eur.* vol. i. p. 97.

— *anceps*, Brehm.

Mr. J. Clarke Hawkshaw has favoured me with the skin of a Buzzard which, he tells me, was killed at Everley, in Wiltshire, in September 1864. After having made a careful examination of the specimen, Mr. J. H. Gurney assures me that it is an example of the species to which the above names have been assigned by the various authors mentioned, that of *desertorum* having the precedence. The countries frequented by it are Algeria, Mogador, European Turkey, the mouths of the Volga, Syria, India, and Ceylon.

Mr. Gurney considers that there is no specific difference between this bird and that which is named in collections *Buteo cirtensis*. He came to this conclusion after examining specimens from Mogador, Tangiers, Erzeroum, and the mouths of the Volga. It is included by Schlegel in his 'Fauna Japonica;' so that it has a very wide range.

"The appearance of this bird when alive," says Mr. Gurney, "is less heavy and more elegant than that of *B. vulgaris*. My living specimen, which was dull-brown when I bought it, has moulted into a rich rufous plumage; and one that was alive in the Zoological Gardens a few years since, underwent a similar change." According to M. Favier, it nests among the rocks, and the male takes its turn in sitting. The egg has a strong resemblance to that of the Black Kite, but is a little more pointed, and the ground-colour a cream-white, that of the former having a greenish tinge.

Mr. Gurney states that "the cere, tarsi, and feet of this Buzzard are lemon-yellow; the irides are sometimes light-hazel, and at others yellow, probably assuming the latter colour as the bird advances in age; a similar variation, however, which exists in the irides of the Common Buzzard is not always referable to age, as I have ascertained by experience."

9. BUTEO LINEATUS.

Red-shouldered Buzzard.

It becomes necessary to notice this species, a single example having been shot at Kingussie, in Aberdeenshire, on the 26th of

February, 1863. It is now in the collection of Mr. Newcombe, of Feltwell Hall, Brandon, Norfolk. As this is a strictly North-American species, I do not consider it necessary to figure it; but such of my readers as may desire to know its history can refer to the writings of Wilson, Audubon, and other authors on American birds.

Genus ARCHIBUTEO.

10. ARCHIBUTEO LAGOPUS Vol. I. Pl. VIII.
ROUGH-LEGGED BUZZARD.

Arrives in the British Islands in autumn, occasionally in considerable numbers, when moving in migratory flocks. Its nest is stated to have been once found near Hackness, in Yorkshire, and also in the neighbourhood of Banff (*vide* 'Ibis,' 1865, p. 12).

Genus PERNIS.

Of this form there are two very distinct species—one, the *P. apivorus*, inhabiting Europe, and the other the *P. cristatus* of India. The natural food of both is honey, bees and wasps, and their larvæ.

11. PERNIS APIVORUS Vol. I. Pl. IX.
HONEY-BUZZARD.

A summer visitant to us and to Central Europe, which, after breeding, migrates southward to pass the winter.

Subfamily ASTURINÆ.

Genus ASTUR.

Of this form two species have been regarded as pertaining to the British fauna—namely, the *Astur palumbarius* of Europe, and the *A. atricapillus* of America. In the present work only the former has been figured.

12. ASTUR PALUMBARIUS Vol. I. Pl. X.
GOSHAWK.

Very generally dispersed over Europe, North Africa, India, and China; occasionally killed in Scotland, where it sometimes breeds.

13. ASTUR ATRICAPILLUS.
American Goshawk.

This American wanderer has certainly been killed at least three times in the British Islands—once in Scotland and twice in Ireland. Respecting the first of these examples, Mr. R. Gray, in his recently published 'Birds of the West of Scotland,' says:—

"In May 1869, when visiting the town of Brechin, in Forfarshire,

I was fortunate in finding a very handsome specimen of this Goshawk in the hands of a bird-stuffer there, who had obtained it a short time previously from a keeper in Perthshire, along with a number of Snow-Buntings and other birds shot by him on the flanks of Shehallion, and all recently skinned."

The following notes respecting the second example were published by Sir Victor A. Brooke in 'The Ibis' for 1870. "I have the pleasure of informing you of the occurrence in Ireland of *Astur atricapillus*, an example of which was shot in the Galtee Mountains in February last, and was at first believed to be a common Goshawk (*A. palumbarius*); but having since had the opportunity of examining some specimens of that species in Lord Lilford's collection, I immediately detected the difference between them and the Galtee bird. Upon returning to Ireland, with the kind permission of Dr. Carte I compared it with a specimen of *A. atricapillus* in the Dublin Society's collection, and cleared up any doubt that remained on my mind, the closely set transverse bars, the longitudinal streaks (stronger and bolder than in the European species), the general dusky appearance of the breast, and the dark slate-blue head, removing all question on the subject. The bird was a mature female, and weighed 3lb. 7oz.; the ovary was somewhat enlarged; and the stomach contained the remains of a rabbit." Of the third example, all that has been recorded is that it was shot shortly after the above, near Parsonstown, King's County, and was also a female.

A certain amount of interest attaches to the occurrence of these Goshawks, inasmuch as it tends to show how frequently American birds cross the Atlantic to our shores; but if all such visitants were to be figured, how greatly extended would be the 'Birds of Great Britain.'

Subfamily ACCIPITRINÆ.

Genus ACCIPITER.

Of this genus only one species frequents the British Islands; but several others are found in Africa, India, China, North and South America. The whole of them are active dashing birds, often flying near the ground and suddenly surprising the smaller insectorial species, upon which they principally prey. The sexes differ considerably in size, the males being much smaller than the females. A character by which they are at once distinguished from the *Asturinae* consists in the great length of their middle toes.

14. ACCIPITER NISUS Vol. I. Pl. XI.

SPARROW-HAWK.

A common, stationary species, breeding in all our counties.

Subfamily FALCONINÆ.

Genus FALCO.

The members of this genus are preeminently bold, courageous, and sanguinary, many of them, especially the Gyr Falcons and Peregrines, not hesitating to attack in the air birds much larger than themselves; and when trained for hawking, as they have been from time immemorial, their courage and daring is so much enhanced that they will engage with birds of even larger size than they do in their wild state. Structurally they are better adapted for a quick and arrow-like flight than any other of the Raptores.

One or other of the numerous species of this group inhabit nearly every portion of the globe. The Gyr Falcon and its immediate allies are almost solely confined to the high northern regions, whence they migrate during autumn and winter towards the equator, but never across it.

The Peregrines are much more generally dispersed than the Gyr Falcons, the various species frequenting most countries both north and south; thus the form exists in Europe, Asia, and Australia, in Africa also from the Atlas range to the Cape of Good Hope, and in America from the latitude of Hudson's Bay to Terra del Fuego. The smaller Falcons, such as the Hobby and Merlin, are also more or less represented in each country, but generally, although not exclusively, are of different species.

15. FALCO ISLANDUS Vol. I. Pl. XI.

ICELAND FALCON.

The subject of the great northern Falcons will be found so fully treated of in the body of the work that it would be mere tautology to say more here than that this bird is, as its name implies, a native of Iceland, and, but more sparingly, of Greenland. It is also said to be found in Hudson's Bay and other of the extreme northern parts of America. Occasionally adults, but more frequently young birds of the year, wander as far south as the British Islands.

16. FALCO ISLANDUS Vol. I. Pl. XII.

ICELAND FALCON (Young).

Appears to be darkly coloured from the nest, but never so deep in tint as that of the true Gyr Falcon.

17. FALCO CANDICANS Vol. I. Pl. XIII.

GREENLAND FALCON.

This species inhabits the icy regions of Greeniand, Hudson's Bay, and other parts of Arctic America, and is less frequently seen in the British Islands in the adult state than the *F. islandus*, from which it

is distinguished by the extreme whiteness of its plumage, and by the young being lightly coloured from the nest.

18. *FALCO CANDICANS* Vol. I. Pl. XIV.
GREENLAND FALCON (dark race).

My plate represents a supposed dark race of the preceding species; but as the strongly defined marks on the back vary considerably in different individuals, and the tail-feathers differ still more so, some being wholly white, others barred, and others, again, having irregular dark markings, I am induced to regard these darkly marked birds as the result of a cross between *F. islandus* and *F. candicans*. The young appear to be lightly coloured from the nest; but a considerable difference takes place at the first moult, when the feathers of the back are ornamented with long and broad blotches, offering a strong contrast to the narrow, lunate cross markings of the old bird. I have been induced to give two figures of these unusually marked birds.

19. *FALCO CANDICANS* Vol. I. Pl. XV.
GREENLAND FALCON (dark race, young).

Lord Cawdor's bird, now in the British Museum, from which my figure of the Gyr Falcon in the 'Birds of Europe,' and Mr. Yarrell's in his 'British Birds,' were taken, is a young specimen of this race; and it is in this stage that most of the individuals are found with us.

20. *FALCO GYRFALCO* Vol. I. Pl. XVI.
NORWEGIAN, or GYR FALCON.

The true Gyr Falcon of Norway, Sweden, Finland, and Western Russia is a smaller bird than the three preceding; and both the adult and young are darker in colour. As yet, it has not been found in the British Islands, although its native country is so near at hand. The plate has been given to show the differences which exist among these northern Falcons, to which Professor Kaup has applied the separate generic appellation of *Hierofalco*.

21. *FALCO PEREGRINUS* Vol. I. Pl. XVII.
PEREGRINE FALCON.

Besides Great Britain, the Peregrine frequents Greenland, Iceland, the whole of Europe, North Africa, India, and China.

The following note, illustrative of one of the habits of this bird, kindly communicated to me by the Duke of Argyll, will prove of interest. It is dated from Inverary, June 4, 1868. "I find we are rich this year in nests of the *Falconidæ*:—two of the Peregrine; two of the Hen-Harrier, and a third, the spot not yet discovered; and one of the Merlin. One of my keepers, who is, I think, a reliable man, tells me that the day before yesterday, when he was watching one of the Peregrines' nests, he saw the male come from across Loch Fyne

with a bird in his talons. When he cried, the hen bird came out of the precipice and joined him in the air, and took from the male the bird he was carrying. This must have been a pretty sight."

22. *FALCO SUBBUTEO* Vol. I. Pl. XVIII.

HOBBY.

A summer bird in our islands, where it breeds in woods, either in the forsaken nest of a Crow or in one which it builds for itself. I have received Hobbies from other countries besides Britain and the continent of Europe, viz. India, China, and Africa, but not from America, where indeed, it is not found. This bird and some others of the same form have been deemed sufficiently distinct from the other Falcons to constitute it the type of a separate genus; by those authors, therefore, who adopt minute divisions of genera, it is termed *Hypotriorchis subbuteo*, instead of *Falco subbuteo*. It is less bold and sanguinary than the Peregrine or the Merlin, feeds on insects to a considerable extent, particularly Chaffers, and consequently is somewhat crepuscular in its habits, such large insects being principally obtainable as they flit round the tops of great trees after sunset.

23. *FALCO AESALON* Vol. I. Pl. XIX.

MERLIN.

This bird has also been removed by Professor Kaup from the genus *Falco* into that of *Aesalon*, a division which, being a very natural one, the scientific ornithologist will not repudiate; but in a work on our native birds these minute divisions are scarcely admissible, since the finding of so many of their old friends under new appellations could scarcely be otherwise than distasteful to my readers. In many instances where I have departed from the practice of the older naturalists, I have been not lightly censured for the innovation; but the time will come when the generic appellation bestowed upon each distinct form will be more generally adopted.

The Merlin of the British Islands is by no means the only representative of the genus *Aesalon*; for there are several very distinct species in other countries, the names of which would be given were I writing a work on general ornithology instead of one on the birds of a limited area.

The *F. aesalon* is a resident species, and very generally dispersed over the three kingdoms.

Genus *ERYTHROPUS*.

At least two species of this elegant form are known. Of these, one, *E. vespertinus*, is a native of South and South-eastern Europe, but occasionally wanders into Britain; the other, *E. amurensis*, is found on the Amur, in Nepaul, and over the greater part of South-eastern Africa. In disposition these birds are less sanguinary than the true Falcons; and their food consists principally of insects and their larvæ.

24. *ERYTHROPUS VESPERTINUS* Vol. I. Pl. XX.

ORANGE-LEGGED HOBBY.

Although truly but an accidental visitor, at least thirty specimens have from time to time been killed in the British Islands, the greater number in England—Ireland and Scotland contributing only one each.

Genus *TINNUNCULUS*.

The birds trivially termed Kestrels comprise many species which are very generally dispersed over the Old World, Australia not excepted. In the New they are less numerous; and those that are there found have been formed by Professor Kaup into a distinct genus, that of *Pecilornis*.

25. *TINNUNCULUS ALAUDARIUS* Vol. I. Pl. XXI.

KESTREL.

The "Windhover," as this bird is also termed, is so well known to every one who visits the country and "has eyes to see, and a mind to observe," that any special comment respecting it is unnecessary. The whole of Britain, the continent of Europe, Africa, India, and China are also frequented by it. Its food is much varied; for it eats mice, insects, mollusks, fish occasionally, and the young of most of the field-loving birds which nest on the ground, and, when opportunity offers, does not object to the young of the Partridge and Quail. Such propensities, however, are in my opinion but a trifling counterpoise to the usefulness of this elegant bird; in fact it deserves protection instead of that extermination which will be its fate if a more friendly feeling than at present exists cannot be created in its favour.

26. *TINNUNCULUS CENCHRIS*.

Lesser Kestrel.

In June 1868, the Museum of the Yorkshire Philosophical Society was "fortunate enough to obtain a fine specimen, killed within a few miles of York, of a species of Falcon, the occurrence of which in this country has, I believe, never before been authentically recorded, namely the Little Kestrel of South-eastern Europe, (*Tinnunculus cenchris*, Naum.). The specimen, which is a mature, but apparently not an old male, was presented to the Museum by Mr. John Harrison, of Wilstrop Hall, near Green Hammerton, who shot it upon his farm at that place, after having observed it for some little time flying about. The date, he thinks, was about the middle of last November; but of this he took no note, as he at first thought the bird was merely a small and curious variety of the common Kestrel. It, however, presents all the distinctive characters of *Tinnunculus cenchris*, among which the yellowish-white claws may be mentioned as affording an easy means of identifying the bird."

This bird has been forwarded by the authorities of the Museum

for my inspection ; and I find it to be, as represented, an example of the above species. I have not, however, figured this bird ; it would be desirable to see other examples.

27. *TINNUNCULUS SPARVERIUS*.

American Kestrel.

A specimen of this bird, killed in Yorkshire, is now in the possession of the Rev. C. Hudson, of Trowell Rectory, near Nottingham, who states that it has been in his possession for about twelve years, and that he purchased it from a joiner named Brown, formerly living at Thorpe Hall, who was an enthusiastic collector of birds, and in the habit of preparing them for people in that neighbourhood. Brown's account of the bird, which he denominated the "American Falcon," was that it was shot between Bridlington and Bridlington Quay, one Sunday morning, by a man who sold it to him for eighteen pence. Through the kindness of Mr. F. J. S. Foljambe, Mr. Hudson kindly sent up his bird for my inspection, when I found it to be a very fine adult male of the American Kestrel, and not, as supposed, a second example of the *T. cenchris*.

Subfamily MILVINÆ.

Genus MILVUS.

The true Kites, or the members of this genus as now restricted, are birds of the Old World, over which they are so generally distributed that, with the exception of New Zealand and Polynesia, one or other of the few species known are to be found in every part of it. Their disposition is less cruel than that of the true Falcons ; and they feed principally on garbage ; they are consequently useful scavengers, and, moreover, arrant thieves.

28. *MILVUS REGALIS* Vol. I. Pl. XXII.

KITE OF GLEAD.

The common Kite of England, which in Shakspeare's time might probably be hourly seen soaring over the metropolis, is now, thanks to the exterminating hand of man, rarely to be seen in any part of the country. If a solitary pair should occasionally be met with, they should be hailed with reverence as being almost the sole remnant of a departed race, so far as our islands are concerned ; for in Central and Eastern Europe, Asia Minor, and North Africa the species still exists. The Kites build large, grotesque, untidy nests of moss, wool, rags, and rubbish of every description ; and when our species was plentiful, it must have kept the housewife on the alert for her frills and furbelows hung out to dry on the village hedge, fully justifying Shakspeare's line :—

"When the Kite builds look to lesser linen."

Inhabits Europe generally, Asia Minor, and North Africa.

29. MILVUS MIGRANS Vol. I. Pl. XXIII.

BLACK KITE.

I have mentioned above the approximate extermination of the English Kite; and I may now state that, should such unhappily be the ultimate result, it seems likely that its place would be supplied by another species, the *Milvus migrans*, which would seem to show some indication of an intention to come among us, at least in one instance, as will be seen on reference to my plate of the species, which was taken from a specimen killed at Newcastle-on-Tyne.

Inhabits Central Europe, Siberia, Palestine, Africa, and Australia, in which latter country it is only an accidental visitor.

Genus NAUCLERUS.

The single species of this form is remarkably different from all the other Kites. Its more slender structure, lengthened wings, and long forked tail indicate that it possesses vast powers of flight, and that it would experience but little difficulty in making a transit from its native country to even very distant shores, when circumstances force it to leave its own.

30. NAUCLERUS FURCATUS.

Swallow-tailed Kite.

This bird is so strictly American that I have not given a figure of it, notwithstanding it has been killed at least five times in our islands, the earliest of these occurrences having been at Ballachulish, in Argyleshire, in 1772—since which others have taken place at Wensleydale, at Farnham, in Cumberland, and on the Mersey.

Subfamily CIRCINÆ.

The Harriers, comprising numerous species, are so widely dispersed over the face of the globe as to warrant the use of the term universal with reference to their distribution. In each of the five great divisions of the globe one or other of the seventeen known species are to be found. In Europe there are four, three of which inhabit and breed in Britain. In habits and economy they do not resemble the Falcons, the Buzzards, or the Kites, but assimilate somewhat to the Strigidæ, or Owls. Their actions, indeed, are peculiar to themselves; and their great flapping wings render them conspicuous objects when flying over a marsh or the sunny side of a moor, with keenly searching eyes, in pursuit of their food, which varies with the nature of the locality. If in the fen, reptiles, from the snake to the newt, are captured and eaten, as are frogs and insects; at the breeding-season young Snipes, Moorhens, or other nestlings are fortunate if they escape their scrutinizing eyes. They mainly nest on the ground, and lay four or five white eggs. Their flight is somewhat laboured and flapping.

Ornithologists have divided the Harriers into five different genera; and even the three which inhabit Britain have each received a separate generic title, a procedure which may seem superfluous to some persons; but before placing his veto upon it each objector should have all the known species before him, when he would perceive that the great Marsh Harrier, with its brown plumage, differs considerably from the slender ash-coloured bird with its barred tail, and both from the uniformly coloured and stouter built Hen-Harrier. Knowing how strong the feeling is against the multiplication of generic terms, I have in this work retained them all in the genus *Circus*.

31. *CIRCUS ÆRUGINOSUS* Vol. I. Pls. XXIV. & XXV.

MARSH HARRIER.

The draining operations which have been carried on of late years in various parts of the country have rendered many of the districts formerly adapted for the well-being of this and many other species no longer tenable by them; and from the great antipathy to this bird exhibited by every land-owner and game-keeper, it is now becoming scarce in this country; but in Holland and other low countries of Europe, Africa, India, and China it still holds its own. The plumage of the yearling and adult birds differs so greatly that I have been induced to give two plates in illustration of these peculiar phases in their history.

32. *CIRCUS CYANEUS* Vol. I. Pl. XXVI.

HEN-HARRIER.

Formerly much more numerous than at present, the all-destroying hand of man being directed towards its extermination; but it still exists in its usual numbers in Scotland, where, Mr. Robert Gray states, it is very common "on all the islands of the Outer Hebrides group, and also throughout the inner islands, Skye, Mull, Islay, Jura, &c., where it is known by the Gaelic name of *Clamhan luch*, signifying mouse-hawk," and adds that he has "seen twelve or fourteen specimens in one day on Benbecula and North Uist, where its hunting-grounds are of a similar nature."

The following note on the nesting of this species, from the pen of the Duke of Argyll, will be found of interest. Writing to me respecting some nests of two or three species of *Falconidæ* observed by him at Inverary early in June 1868, his Grace says:—"The Harrier's nest is on the face of a steep bank covered with long heather, and falling into a stream of considerable size. The nest itself is placed on a little bare shelf or ledge of *Sphagnum* moss, and with none of the heather bending over or concealing it; but the nature of the ground is such that it is not visible from the opposite bank of the stream; and on its own side the face is so steep that it would not be seen unless one were to come a few feet above it; but to birds flying over, the nest must be a conspicuous object. It contained six eggs, pure white, but with a slightly bluish tinge, which, I am told, is

deeper when first laid. The nest was composed of dried twigs and stalks of heather as a foundation, and very nicely lined with straw, composed of dried 'sprints' (or a kind of rush) and one or two bits of dried fern. The straws were nicely laid and bent round, so as to take the shape of the nest. The bulk of the whole was small; but the cup was decided though shallow.

"The hen rose from the nest when we came nearly opposite to her, about 150 yards off. She was a fine large Ringtail, and soared high over the hills. The eggs were all just *chipped* by the approaching extrusion of the young. I took one of the eggs, to see the development of the chick; it was quite naked, but the bill perfectly formed. The keeper tells me that the whole six eggs were laid twenty-seven days ago; therefore it must take about thirty days to hatch them."

33. *CIRCUS CINERASCENS* Vol. I. Pl. XXVII.

ASH-COLOURED HARRIER.

Although I have called this species by the above appellation, it is far better known to British ornithologists by the trivial name of Montagu's Harrier. The wings of this bird are long and curved; and its large fan-shaped tail, crossed by numerous chestnut-coloured bars, must render it very conspicuous during flight. Judging from the result of my own observations, I should say that this is the commonest of the Harriers, and that it is certainly the one most universally dispersed over our islands. Its breeding-places have been found more frequently in Cornwall and other southern and western counties than elsewhere. So widely does this bird range that it is to be found in most of the countries between Europe and China.

I have mentioned that reptiles form no inconsiderable portion of the food of the Harriers, and in confirmation I may quote the following passage from a letter addressed to me by my friend Mr. Gatcombe, on the 3rd of May, 1872:—"A few days since, I had a fine old male Montagu's Harrier brought to me. It was killed on Dartmoor; and from its crop and stomach I took no less than *fourteen* lizards, of two kinds, all nearly perfect, and each full 6 inches long."

Family STRIGIDÆ.

In round numbers there are about 200 different species of Owls distributed over the surface of the globe, only twelve of which were known to Linnæus, by whom they were included in one genus, *Strix*. The entire group are now divided into two great divisions, *Nocturni* and *Diurni*, and these again into minor subfamilies, genera, and subgenera, just as the ornithologist may please to consider them. In England there are ten species, belonging to as many genera. As might be supposed, so large a family of birds vary in size from that of a small Eagle to that of a Sparrow. So extensively are they distributed over the world, that it is almost only in the arctic and antarctic

regions that they are not found. They are fewest in New Zealand and Polynesia, and are perhaps more abundant in Australia than elsewhere, not less than six species of true *Strix* inhabiting that country, besides others pertaining to different genera, all of which find a ready means of subsistence in the many small anomalous quadrupeds of that anomalous section of the earth's surface. The excess in the numbers of the White or Barn Owls as we call our bird, doubtless keep a wholesome check upon the undue increase of the small animals alluded to. How strange (is it not?) that the neighbouring country of New Zealand should be destitute of small mammals and of White Owls! But this is not the place to enter into a disquisition on the subject; let us proceed to an enumeration of the Owls of our own country.

Genus STRIX.

34. STRIX FLAMMEA Vol. I. Pl. XXVIII.

BARN-OWL.

A strictly nocturnal species, living principally upon mice, insects, and reptiles. Distributed over the three kingdoms and Europe generally. The slight damage attributed to this bird is far over-balanced by the good it effects in the destruction of obnoxious animals.

Genus SYRNIUM.

35. SYRNIUM ALUCO Vol. I. Pl. XXIX.

TAWNY OR BROWN OWL.

Distributed over England and Scotland, but extremely rare in Ireland, if, indeed, it ever occurs there. Lives on mice, rats, moles, and other small quadrupeds; the edges of ponds, too, are frequently examined for any fish that may expose themselves, which it readily seizes. The less its general character is examined the better for its reputation; for, truth to tell, it is a stealthy thief, and commits great depredation among young game, robs the keeper's pens, and does not disdain a chicken; in fact, in prowling habits it is not surpassed by any other species. It is a bird but seldom seen either by day or night; and were it not for its merry hoot, uttered in the stillness of the evening, its presence and whereabouts would not be easily detected. It doubtless destroys rats, weasels, and young rabbits in abundance; and this is about all the good it can be said to effect. Besides our islands, the other parts of Europe are constantly frequented by this bird; but for any further particulars respecting it and its habits I must refer the reader to my account of the species accompanying the plate.

Genus BUBO.

The birds of this genus are but few in number; and of these only one favours Britain with its presence; but that one is the finest of the whole.

36. BUBO MAXIMUS Vol. I. Pl. XXX.

EAGLE OWL.

This truly magnificent Owl, which is not surpassed in size or beauty by any member of its family, is a native of Norway, Sweden, Russia, Germany, the Italian States, Greece, and Siberia, but not India (where its place is occupied by the *Bubo bengalensis*), nor America (in which it is represented by the *Bubo virginianus*). It sometimes comes to England: and it is to be regretted that its visits are not more frequent; for so fine a bird must be an ornament to any country.

The learned are at variance as to whether this species or a little unpretending *Athene* was one of Minerva's favourite birds; both have always inhabited the country around Athens. I must leave it to those who take an interest in classic lore to settle this point to their own satisfaction.

Genus OTUS.

The members of this section of the Owls inhabit both the Old and the New World, but are not very numerous in species. Their fiery eyes and long cat-like ears render them conspicuous objects, whether seen amidst their native woods or as mounted specimens in a museum.

37. OTUS VULGARIS Vol. I. Pl. XXXI.

LONG-EARED OWL.

A constant resident, frequently deposits its eggs in the deserted nests of Crows and other birds, and is partial to pine trees. As its brilliantly coloured eyes indicate, it often flies in the daytime. Feeds upon mice, small birds, and such other food as is commonly eaten by Owls.

"The Long-eared Owl," says Mr. Stevenson, "is another instance of the changes which have taken place in a few years from local causes in the habits of some of our feathered visitants. Whilst drainage and the plough are fast driving the Harriers and other fen-breeders from their accustomed haunts, the rapid increase in our fir plantations, especially near the coast, affords such inducements to this species to remain and breed with us that the autumn visitant of a few years since, only known to stay through the summer occasionally, may now be more properly termed a numerous resident, receiving additions to its numbers in autumn."

Genus BRACHYOTUS.

Of this form but few species are known. They mostly fly near the ground, but will often mount high in the air. The action of their wings appears to be of a heavy flapping character, due probably to the rounded form of those organs.

38. BRACHYOTUS PALUSTRIS Vol. I. Pl. XXXII.
SHORT-EARED OWL.

This is both a resident and a migratory species; for, although it breeds in many parts of the British Islands, particularly in Scotland, great numbers arrive in autumn, at the same time that the Woodcock appears; and hence it is known in some of our counties by the name of the Woodcock-Owl. Full particulars will be found in the pages of letterpress opposite the plate.

Inhabits the moorlands and not the woods, lives upon small quadrupeds and the young of the Grouse and other birds frequenting similar districts. In Norway it feeds upon lemming; it doubtless eats lizards also; and insects probably form part of its diet. Mr. Robert Gray states that in the west of Scotland he has seen this bird "hawking for prey in dull weather at midday over turnip-fields, looking probably for field-mice, which in the autumn months become rather numerous in some places. This Owl, indeed, may be looked upon as a useful friend to the farmer in the localities it frequents."

Genus SCOPS.

Several members of this genus inhabit the northern portions of the Old World; and others are found in the New. They are generally very prettily ornamented; and their bright yellow eyes, conspicuous ear-tufts, and the harmoniously blended grey and brown moth-like markings of their plumage render them objects of especial interest.

39. SCOPS ZORCA Vol. I. Pl. XXXIII.
SCOPS OWL.

As is the case with many other species of birds, it is difficult to define what is the proper home of this beautiful little Owl; but we may with certainty state that it is common in France and all the southern states of Europe. Although it may occasionally breed in England (and Mr. Harting has enumerated twenty instances of its occurrence), it can only be regarded as one of our chance visitors.

Mr. Robert Gray remarks:—"It is a somewhat curious feature in the history of the Scops Eared Owl that it lives wholly upon insects. It is therefore, in temperate countries, strictly migratory in its habits; and in France, where it is not uncommon, it is said to come and go with the Swallow."

40. SCOPS ASIO.
Mottled Owl.

A native of North America and Canada, which it is necessary to notice because it is said to have been twice killed in this country; but, as Mr. Harting remarks, "its occurrence in England must be considered doubtful."

"This small North-American species," says Mr. Stevenson, "was

first included amongst the accidental visitants to this country by the late Mr. Yarrell in the third edition of his 'British Birds,' in which will be found the notice of a specimen shot in the neighbourhood of Leeds in 1852, of which a figure and description were given in the 'Naturalist' for the same year (p. 169). Mr. Gurney informs me that some years back he purchased from the late Mr. Thurtell an adult specimen of this rare Owl, said to have been killed near Yarmouth, but till then supposed to be only a European Scops Owl. This bird was unfortunately destroyed after it came into Mr. Gurney's possession."

Genus NYCTEA.

Of this form the single species known is exclusively an inhabitant of the high northern regions of both the Old and the New World.

41. NYCTEA NIVEA Vol. I. Pl. XXXIV. SNOWY OWL.

I have always regarded this bird as an accidental visitor to England, Scotland, and Ireland; but Mr. J. H. Dunn informs me that forty-five years ago it bred every year on the hills about four miles from Stromness, and Mr. Robert Gray says it may almost be regarded as a regular spring visitant to the Hebrides. Its great size and powerful claws indicate that quadrupeds of considerable bulk are within the compass of its destructive powers; and hence the hare, the lemming, white grouse, and the ptarmigan have but little chance of escape when once enclosed within the grasp of its talons. Its proper home is the icebound regions of the north; in Lapland it follows the lemmings in their migration southwards.

"So little has been published in England," says Professor Newton, when exhibiting some rare eggs at a meeting of the Zoological Society (Dec. 10, 1861), "respecting the Snowy Owl's manner of nidification that I hold myself excused for presenting the information I have been able to collect on the subject. . . . According to Herr Wallengren, Professor Lilljeborg, on June 3rd, 1843, found on the Dovrefeld a nest of this bird containing seven eggs, placed on a little shelf on the top of a bare mountain far from the forest and easy of access. Professor Nilsson mentions, on the authority of Herr A. G. Nordvi, that the Lapps in East Finmark assert that the Snowy Owl lays from eight to ten eggs, in a little depression on the bare ground on the high mountains. These accounts were in every way corroborated by the information obtained by Mr. John Wolley during his long sojourn in Lapland. He several times met with persons who had found nests of this Owl, and states that he was told the old birds sometimes attack persons that approach their nests. . . . They seem to breed commonly in the districts explored by him only when the lemmings are unusually abundant. From the 16th to the 24th of May is supposed to be the time when they usually breed; and in 1860 a Lapp, who was unfortunately not one of his collectors, found a nest with six eggs, which, instead of preserving, he ate.

"Many specimens, said to be eggs of this bird, have lately been received by European oologists, the majority of which are from the missionaries in Labrador. One of those I now exhibit I obtained from Herr Möscher. He received it, with several others, in 1860, from the Okkak, one of the four stations maintained on the coast by the United Brethren. He has had in all more than two dozen from that quarter. The Esquimaux find and bring them to the missionaries; and the accounts they give tally exactly with those I have just quoted from other sources. The bird always breeds on the ground in bare places, and often lays a considerable number of eggs."

Genus SURNIA.

Hitherto the birds of this form inhabiting Northern Europe and the northern parts of America have been regarded as identical, in which case the genus would consist of a single species; but, at a recent meeting of the Zoological Society, Messrs. Sharpe and Dresser have endeavoured to show that the American bird is different from the European.

42. SURNIA FUNEREA Vol. I. Pl. XXXV.

HAWK OWL.

Six or seven instances of the occurrence of the Hawk Owl in Britain are on record.

Genus NYCTALE.

The only member of this genus known to have been found in England is the *Nyctale Tengmalmi*, of Northern Europe and North America.

43. NYCTALE TENGMALMI Vol. I. Pl. XXXVI.

TENGMALM'S OWL.

Although Mr. Harting enumerates twenty instances of the occurrence of this bird in various parts of our islands, it must still be regarded as a rare and uncertain visitor. Its range extends over Europe and Northern Asia, as far south as Nepal; and if, as Mr. Elliot believes, the species known as *N. Richardsoni* be identical with it, then the northern and arctic portions of North America must be included within the circuit of its domain.

Genus ATHENE.

This section of the Owls comprises many species, distributed over Europe, India, and other portions of the Old World. By modern systematists these have been subdivided into no less than fifteen subgenera, the particulars of which need not be detailed here, inasmuch as we have only to deal with the single species which visits our country.

44. *ATHENE NOCTUA* Vol. I. Plate XXXVII.
LITTLE OWL.

A very common bird in France and other parts of Europe. In England it may have and doubtless has occurred more frequently than has been supposed; but it is a bird which cannot be easily detected, however diligently it may be searched for. Numerous instances of its occurrence are on record: and besides the nest mentioned by Hunt as having been taken at no great distance from Norwich, another is reported to have been met with in the New Forest, and the young taken and reared at Harrow.

ORDER INSESSORES.

Family CAPRIMULGIDÆ.

Members of this great family of nocturnal birds frequent the warmer portions of almost every part of the globe, and are nearly as varied in structure as they are numerous in species. In the New World the cave-loving *Steatornis* and the long-tailed *Hydropsales* are among the most conspicuous of the forms inhabiting that section of the world, as the great *Podargi* and the eared *Lyncornithes* are of the Old. Their food mainly consists of insects and their larvæ, with occasionally fruits and berries.

Genus CAPRIMULGUS.

The birds of this restricted form are confined to the Old World, over the greater portion of which they range. Two are found in Great Britain.

45. *CAPRIMULGUS EUROPEUS* Vol. II. Pl. I.
NIGHTJAR or GOATSUCKER.

The Nightjar, Goatsucker, or Churn-Owl, by which trivial names this species is known, is a true migrant, and is very generally dispersed over the British Islands from its arrival in May until its departure in September.

46. *CAPRIMULGUS RUFICOLLIS* Vol. II. Pl. II.
RED-NECKED GOATSUCKER.

An inhabitant of Spain, North Africa, and Palestine, which has once appeared in our islands.

Family CYPSELIDÆ.

The Swifts have been divided into two subfamilies, *Cypselinæ* and *Chæturinæ*. They are found both in the New and the Old World. Two of the *Cypselinæ* occur in Britain; and one of the *Chæturinæ* having in a single instance been killed here, it becomes necessary to include it in the list of our avifauna.

Genus CYPSELUS.

47. CYPSELUS APUS Vol. II. Pl. III.
SWIFT.

Arrives in May and departs southward in August or the early part of September, and is therefore a true migrant.

48. CYPSELUS MELBA Vol. II. Pl. IV.
ALPINE SWIFT.

A common migrant on the continent of Europe, particularly in its central and southern parts; it also inhabits Africa and India, and is an accidental visitor to Britain.

Genus CHÆTURA.

The members of this genus are generally dispersed over America; nor are they absent from Asia, Africa, or Australia. They have been divided into several subgenera: that of *Hirundapus* has been assigned to the single species which in a solitary instance has found its way to Britain; but I retain it under the older term by which it is more generally known.

49. CHÆTURA CAUDACUTA.
Spine-tailed Swift.

The solitary example above alluded to was "shot about 9 P.M. on the 8th of July, 1846, by a farmer's son, near Colchester, in Essex; he saw it first in the evening of the 6th. He tells me it occasionally flew to a great height, was principally engaged in hawking for flies over a small wood and neighbouring trees; being only wounded, it cried very much as it fell, and, when he took it up, clung so tightly to some clover as to draw some stalks from the ground" (T. Catchpool, jun., in the 'Zoologist' for 1846, p. 1493).

If Indian, Chinese, and Australian examples are identical, as I believe they are, then the range of the present species is wide indeed; but possessing, as it does, vast wing-powers, there is no reason why it should not pass and repass from one country to another with the greatest ease. Distance being mere child's play to a bird so largely endowed with the means of flight, its accidental occurrence in England need not excite surprise.

Family HIRUNDINIDÆ.

The members of this great family of air-frequenting birds are almost universally dispersed, so much so at least that Swallows and Martins are known to the inhabitants of most parts of the globe, except those of New Zealand and Polynesia, where, strange to say, none are to be found.

More than a hundred species are enumerated in our lists, in which large number many variations of form exist, each characterized by some peculiarity in habits, mode of life, kind of food they eat, construction of nest, or mode of nidification. Three migratory species, each pertaining to a distinct genus, make our islands a temporary resting-place during the months of summer.

Genus HIRUNDO.

The species of this form, of which our common Swallow is the type, inhabit Europe, India, China, and North America. They are distinguished for the elegance of their structure and the ease and buoyancy of their evolutions.

50. HIRUNDO RUSTICA Vol. II. Pl. V.

COMMON SWALLOW.

Comment upon this familiar species is quite unnecessary; we all know it arrives in spring, and, after bracketing its cup-shaped nest in our chimneys and outhouses, and rearing its progeny upon the insects it captures in their neighbourhood, departs again in autumn to more southern climes, carrying with it our God-speed for its welfare until it returns to receive our renewed greeting.

Genus CHELIDON.

Other species besides the clothed-tarsed one frequenting our island are known; they are mostly from India, China, and Japan.

51. CHELIDON URBICA Vol. II. Pl. VI.

HOUSE-MARTIN.

This pretty fairy-like bird arrives about the middle of April, constructs a semiglobular nest of mud under the eaves of our dwellings, and, after rearing its progeny, departs again in the autumn to the warmer country of Africa—where the sun still vivifies an abundance of insect life, and thus furnishes a plentiful supply of food to these insectivorous birds.

Genus COTYLE.

A very distinct little group are the Sand-Martins, whose habits are peculiar and very different from those of the Swallow or the House-Martin. They inhabit the Old and the New Worlds.

52. *COTYLE RIPARIA* Vol. II. Pl. VII.
SAND-MARTIN.

Arrives early in spring, assembles in flocks, breeds in colonies, makes a slight nest in a hole in a sandbank, and, after rearing its young, departs south on the first chilly days of August or September.

53. *COTYLE RIPARIA* Vol. II. Pl. VIII.
SAND-MARTIN (young)

as seen, on the bank of the Thames, in the month of August, prior to departure south.

Genus *PROGNE*.

54. *PROGNE PURPUREA*.
Purple Martin.

A strictly American form, of which four or five examples are said to have been killed in our islands—one near Dublin, one in Yorkshire, and two at Kingsbury in Middlesex.

Genus — ?

55. — *BICOLOR*.

White-bellied Swallow.

Another American form, for which a generic title has not yet been proposed. It is said that a specimen has been killed near Derby; vide Wolley, in the 'Zoologist' for 1853, p. 3806, and Newton in 'Proceedings of the Zoological Society' for 1860, p. 131.

Family MEROPIDÆ.

The members of this family are among the most ornamental of the Insessorial birds, and are as elegant in form as they are beautiful in colour. Europe, Asia, Africa, and Australia are the countries in which one or other of the not very numerous species are found. As the thinness of their plumage and the slightness of their form would indicate, they appear to be sensitive to cold; and most of them are resident in the tropical or warmer portions of the countries mentioned, though one species, the *Merops apiaster*, is very common in Spain. Insects of the various orders constitute their chief food. The species have been divided into several genera.

Genus *MEROPS*.

The species inhabiting Europe is the type of this form.

56. *MEROPS APIASTER* Vol. II. Pl. IX.
BEE-EATER.

Although there are many instances of the occurrence of this bird in Britain, it can only be regarded as an accidental visitor; and

so uncertain are its visits, that years may elapse without an example being seen. It is common, and breeds, in Spain, where it deposits its eggs in holes of sandbanks.

Family ALCEDINIDÆ.

The distribution of the Kingfishers may be said to be almost universal; but of the 125 species described, few are to be found in the New World, the family being very feebly represented in America. The various species have been much subdivided and received many generic appellations, their structure being as diverse as their modes of life and the kinds of food upon which they subsist. Water is by no means essential to the existence of many of them, especially those which dwell amidst the scoræ of volcanoes and on hot and parched plains,—lizards and insects being the food of those affecting the former situations, while the huge *Dacelos* (frequenting the latter) eat snakes, small quadrupeds, and insects. Fish appears to be the chief food of the members of the restricted genus *Alcedo*, of which our well-known Kingfisher is the type.

Genus ALCEDO.

57. ALCEDO ISPIDA Vol. II. Pl. X.
KINGFISHER.

A resident species; common in all the central portion of England, more scarce in Scotland, and not a common bird in Ireland. Feeds on fish, crustaceans, and insects. It is the only species which habitually lives in Britain and on the continent of Europe, beyond which its range is not very far extended. Other species of this form inhabit India, some of its islands, and Africa.

Genus CERYLE.

A group of Kingfishers, of about a dozen or fifteen species.

58. CERYLE ALCYON.

This American bird has been twice killed in Ireland—once in the county of Meath in October 1845, and again in the county of Wicklow in November of the same year (Thompson, 'Natural History of Ireland, Birds,' vol. i. p. 373). These Transatlantic birds must be regarded as interlopers, since they have no just claims to a place in our fauna.

Family CORACIIDÆ.

No member of this family has yet been seen in the New World; and the Old may claim the form as one of its finest ornithological

productions. There are even fewer species of this family than of the *Meropidæ*; and those few are all warm-country birds. They are abundant in Africa; one or two species frequent India; others the islands of the Eastern archipelago. Up to this time no true Roller has been found in Australia, where it is represented by the members of the genus *Eurystomus*.

Genus CORACIAS.

59. CORACIAS GARRULA Vol. II. Pl. XI.

ROLLER.

Although the Roller is a regular summer visitant to the centre of Germany and other parts of the Continent, its occurrences in England have been few and far between; here, therefore, it can only be regarded as an accidental visitor. It has nevertheless been occasionally killed in the three kingdoms.

Family UPUPIDÆ.

Varied indeed are the opinions entertained by ornithologists respecting the situation this family of birds should occupy in our systems. For my own part, I have always considered its proper place to be near to, if not associated with, the Hornbills (*Bucerotidæ*); hence this is perhaps not the situation in which it would appear in an arrangement of the birds of the world; but it is the best I can assign to it in a limited fauna like that of the British Islands.

Genus UPUPA.

About five species of this very singular form are known; they inhabit Europe, Asia, Africa, and Madagascar.

60. UPUPA EPOPS Vol. II. Pl. XII.

HOOPOE.

An accidental visitor to England, where it generally arrives in May; and its doom is sealed as soon as it makes its appearance: so attractive a creature immediately arresting attention, it soon falls a victim to the gunner; and its mounted skin is found in the houses of the men of Kent and other southern counties.

Family LANIIDÆ.

The Shrikes, comprising many species, are very generally distributed over the surface of the globe, particularly in the Old World. Some of the typical members inhabit Britain and North America, and are also found in Asia and Africa, but not in the islands of the Eastern archipelago, nor in Australia. They are all, to a certain

extent, destroyers of other birds; but their chief food consists of insects, their larvæ, and mollusks. In disposition they are cruel, spitting their victims on thorns or between the interstices of the branches of trees; for what precise purpose is not well understood.

Genus LANIUS.

61. LANIUS EXCUBITOR Vol. II. Pl. XIII.
GREAT GREY SHRIKE.

An accidental visitor, which may occasionally, but does not usually breed in this country. Its proper home is the continent of Europe, beyond the boundary of which it becomes more and more scarce.

62. LANIUS MINOR Vol. II. Pl. XIV.
ROSE-BREADED SHRIKE.

A native of Spain, Turkey, and Greece, which has been killed two or three times in England.

Genus ENNEOCTONUS.

The members of this genus differ considerably from the preceding, inasmuch as, instead of the sexes being alike, they vary in colour and markings. Species of this form are found in Europe, Asia, and Africa.

63. ENNEOCTONUS COLLURIO Vol. II. Pl. XV.
BUTCHERBIRD.

A migrant from the south in May, and returning thither early in autumn.

64. ENNEOCTONUS RUFUS Vol. II. Pl. XVI.
WOOD-CHAT.

Although this bird has been killed in England several times, it can only be regarded as an accidental visitor. It is said to have bred in this country; but, for myself, I have never seen an authenticated egg, which had been taken herein.

Family MUSCICAPIDÆ.

The various members of this family are very generally dispersed over the countries of the Old World.

When I published my Plates of the two following species, the late Mr. George R. Gray had recently indicated, in his 'Catalogue of British Birds,' that the old *Muscicapa atricapilla* pertained to the genus *Muscicapa*, and the *M. grisola* to the genus *Butalis*; but in

his more recent 'Hand-list' he makes the latter the type of *Muscicapa*, and places the former under Sundevall's subgenus *Hedymela*.

Genus MUSCICAPA.

65. MUSCICAPA ATRICAPILLA Vol. II. Pl. XVII.

PIED FLYCATCHER.

A well-known migrant to Britain, chiefly frequenting the northern portion of England, where it breeds. It is rarely met with in Scotland, and never in Ireland. For an interesting note by Mr. Stevenson on a singular immigration of this species on the Suffolk coast in September 1869, see the 'Zoologist' for that year, p. 1492.

66. MUSCICAPA COLLARIS Vol. II. Pl. XVIII.

WHITE-COLLARED FLYCATCHER.

This species, which has once been killed in England, is a native of Eastern Europe.

Genus BUTALIS.

67. BUTALIS GRISOLA Vol. II. Pl. XIX.

SPOTTED FLYCATCHER.

Arrives late in the spring, spreads over the British Islands, and after breeding returns to whence it came, the northern part of Africa.

Genus ERYTHROSTERNA.

The members of this genus, which are but few in number, frequent Eastern Europe, India, and China. They are extremely delicate in structure; and it is marvellous how so frail a bird as the *E. parva* could have crossed the Channel, and thus laid claim to a place in the avifauna of Great Britain.

68. ERYTHROSTERNA PARVA Vol. II. Pl. XX.

RED-BREASTED FLYCATCHER.

For the particulars respecting the capture of three examples of this bird, I refer my readers to my account of the species opposite the Plate; but I may here mention that all were taken in Cornwall, and that they can only be regarded as accidental visitors.

69. VIREOSYLVA OLIVACEA.

Red-eyed Flycatcher.

In Mr. Harting's 'Handbook of British Birds' it is stated that two examples of this purely American species were taken by a bird-catcher at Chellaston, near Derby, in May 1859, the particulars of which will be found in Sir Oswald Mosley's 'Natural History of Tutbury,' page 385.

Family AMPELIDÆ.

Three or four species of this very singular and beautiful family are all that are known. They chiefly inhabit the temperate and northern regions of both the Old and New Worlds, their summer residences often bordering the arctic circle, whence some of them migrate south at the cold season, but only for a short period.

Genus AMPELIS.

70. AMPELIS GARRULUS Vol. II. Pl. XXI
WAXEN CHATTERER.

A native of Norway, Finland, and Russia. Is only an accidental visitor to England; and when it does favour us with its presence, it is mostly in the winter, especially if that season happens to be severe. A distinct species is found in Japan; and the *A. cedrorum*, as we all know, frequents America.

Family SITTIDÆ.

Taking our Common Nuthatch as a typical example, and omitting the members of the allied subgenera *Callisitta*, *Dendrophila*, and *Hypherpes*, there exist about a dozen species of this family, some, if not all, possessing the peculiarity of being able to run up and run down the boles of trees with equal facility. They frequent the temperate portions of Europe, Asia, and America.

71. SITTA CÆSIA Vol. II. Pl. XXII.
NUTHATCH.

This species is not, as has been supposed, entirely confined to Britain; for it is also found in some of the Danish islands and elsewhere. With us it is stationary and common all over England, but is somewhat rare in Cornwall, very scarce in Scotland, and never found in Ireland.

Family PARIDÆ.

More than a hundred species of Tits have been already named; and there are doubtless many more yet to be described. The countries frequented by these tree-loving birds are Europe, Asia, Japan, the Philippines, Java, and Sumatra. Africa, also, from north to south, contains its fair quota; nor are they absent from America, in which country they are principally found in its northern regions. Structurally they present much variety; and in consequence the entire group has been divided into many genera. In the British

Islands, exclusive of the so-called Bearded Tit, which belongs to an entirely different family, we have six species, which constitute the typical examples of almost as many genera. I have, however, only adopted a portion of them, keeping four in the genus *Parus*, one in *Pœcile*, and one in *Mecistura*. The chief food of the Tits consists of insects and their larvæ, with occasionally the addition of fruit. They are mostly pert and lively birds, assuming many varied positions while searching for food among the leafy branches of trees and shrubs.

Genus PARUS.

72. PARUS MAJOR Vol. II. Pl. XXIII.
GREAT TIT.

Resident and common over the three kingdoms. Breeds in April and May. Youthful birds have their cheeks stained with yellow, while in the adult the sides of the face are white.

Generally distributed over Central Europe.

73. PARUS CÆRULEUS Vol. II. Pl. XXIV.
BLUE TIT.

A beautiful saucy little bird, which, being found here at all times, is a resident species. The cheeks, which are white in the adult, are tinged with yellow in the young. As common in the central portion of Europe as with us.

74. PARUS ATER Vol. II. Pl. XXV.
COAL TIT.

A common resident in every county; gives preference to forests of beech and oak. A cheerful, merry little bird, of which the young are more beautifully coloured than the adult, the sides of the face and a portion of the breast being washed with yellow during the first six weeks of their existence. The continental birds, particularly those found in Belgium, are considered distinct by Messrs. Sharpe and Dresser.

75. PARUS CRISTATUS Vol. II. Pl. XXVI.
CRESTED TIT.

A resident species in Scotland; breeds in the woods near Elgin. Is said to have been killed in England, and, on the authority of Mr. Blake-Knox, twice in Ireland.

Genus PŒCILE.

76. PŒCILE PALUSTRIS Vol. II. Pl. XXVII.
MARSH-TIT.

A resident species; scarce in Scotland, except in the Lothians, and still more so in Ireland. Cheek-mark of the young uniform with

the other parts of the body, except the sides of the neck—which are white, and not yellow. Frequents, but not exclusively, plantations, copses, and low humid situations.

Genus MECISTURA.

77. MECISTURA CAUDATA Vol. II. Pl. XXVIII.

LONG-TAILED TIT.

This wandering and interesting bird is a true British resident. It has been separated by Mr. Blyth from the White-headed species of Scandinavia, under the specific appellation of *rosea*; it must, however, be remarked that some of our examples have white heads; and therefore I do not aver that they are, or are not, distinct. Other species of this form are found on the Bosphorus, on the Himalayas, and in China.

Mr. J. H. Gurney, jun., has communicated to me the following interesting fact in connexion with this bird:—"A Mr. Noble once noticed at Blackwall, near Darlington, an object on a fir tree which he took for a Pheasant; but on firing at it he found that, instead of a Pheasant, it was a *great ball of Long-tailed Tits*. He told me that he did not kill less than a dozen. My father informs me that the South-African Colies roost congregated in bunches;" and I have witnessed precisely the same in the *Artamus sordidus* in Tasmania.

78. MECISTURA CAUDATA Vol. II. Pl. XXIX.

LONG-TAILED TIT (young).

Family ——— ?

Genus CALAMOPHILUS.

79. CALAMOPHILUS BIARMICUS Vol. II. Pl. XXX.

BEARDED TIT.

A resident species in the marshes and along the sides of the rivers of our eastern counties; but the drainage of the former and the clearance of the sedges of the latter have greatly diminished the numbers of this lovely little bird. Still it is common with us, and even more so in Holland and other fluviatile districts of Central Europe.

This bird is by no means a genuine Tit, although it is commonly so called, and is placed here for the want of a more natural situation.

Family ORIOLIDÆ.

A group of Old-World birds, the members of which are beautifully coloured, yellow and black being the prevailing tints, particularly

of that section of them typified by the *Oriolus galbula*. The countries they frequent are either hot or temperate, Africa, India, China, the Philippines, Java, Sumatra, and some of the islands of the Eastern Archipelago being tenanted by one or other of the species.

Genus ORIOIUS.

80. ORIOIUS GALBULA Vol. II. Pl. XXXI.

GOLDEN ORIOLE.

Although common in many parts of Europe during the breeding-season, with us it is a rare bird, and must be included among our accidental spring visitants. In the Scilly Islands five or six are often seen together; but after remaining there quite unmolested for two or three weeks, they invariably betake themselves to the mainland, where persecution and death await them. The following note from my friend Mr. Rodd, respecting an unusual irruption of this species, will be read with interest; it was received on the 24th of April, 1870. "I am sure you will be interested in hearing that a large immigration of Golden Orioles has taken place in the immediate neighbourhood of Penzance and at the Scilly Isles. They are mostly in superb adult plumage. Five were killed out of eight, and a fine male and a female besides, at Trevethoe, near Hayle. A flock of forty or fifty was risen in a thick plantation on the grounds afterwards." Surely such beautiful birds, when they do arrive in this country, should receive protection instead of the destruction which now invariably awaits them.

Family TURDIDÆ.

A large number of medium-sized insessorial birds are included in this family—Thrushes, Blackbirds, Fieldfares, Redwings, &c. Their omnivorous appetite leads them to eat insects and their larvæ, snails, worms, fruits, and berries. Some are constantly resident, others are migratory; some spend the summer, others the winter with us.

Genus TURDUS.

The Thrushes and the Blackbirds are seemingly very different; and were it not for numerous intervening forms, the generic characters of *Turdus* and *Merula* would be more easily defined. The greater part inhabit the temperate portion of the earth, but are not found in Australia or New Zealand.

81. TURDUS MUSICUS Vol. II. Pl. XXXII.

THRUSH.

Very generally distributed, and constantly residing and breeding here, as it does also in most parts of the European continent.

82. *TURDUS VISCIVORUS* Vol. II. Pl. XXXIII.

MISSEL-THRUSH.

Strictly stationary. Common in Europe; generally breeds in all the middle counties of England. It also inhabits Scotland, where it is annually becoming more and more numerous. Sings early and breeds in May. The following note from Professor Owen, dated Sheen Lodge, Richmond Park, 28th April, 1872, respecting the pugnacious propensities of this species, cannot fail to be of interest:—"You know that the Missel-Thrush boldly attacks Magpies and other birds larger than itself; but you may not be aware that it bullies man himself. I was transplanting, about sunrise this morning, and was startled by a loud menacing noise above me, and on rising and looking up saw a Missel-Thrush darting from branch to branch, chattering loudest as it passed over and near to my head; and then it made a dash at me, sweeping close past my face with a chattering scream, and, alighting on a branch about six yards off, turned round and dashed back again, so that I 'ducked' to save my eyes; and these sweeping attacks were repeated four or five times before (out of a desire not to disturb a bird whose wild winter-notes I like) I moved off. I went a round-about way to a garden-seat about twenty yards from the scene of the first disturbance, and shortly after heard the same chattering, clattering, bullying note, and, having my binocular, made out my friend (or enemy) darting about the boughs of an old acacia overhead, and continuing his remonstrances against my vicinity, to which I again yielded."

83. *TURDUS ILIACUS* Vol. II. Pl. XXXIV.

REDWING.

A winter visitant, arriving with the Fieldfare in autumn, and departing northward in the spring. Summers in Iceland, Norway, Sweden, and other portions of the old continent bordering the arctic circle.

84. *TURDUS PILARIS* Vol. II. Pl. XXXV.

FIELDFARE.

A winter visitant only. Breeds in Norway and many other parts of the Old World. Comes to us about the same time as the Woodcock—that is, in October, the period when the Ring-Ouzel departs.

85. *TURDUS ATROGULARIS* Vol. II. Pl. XXXVI.

BLACK-THROATED THRUSH.

A native of Eastern Europe and Northern Asia. Has been once killed in England, as will be seen on reference to the Turdine section of the work, where the circumstance of its capture near Brighton is fully detailed.

Genus *MERULA*.

86. *MERULA VULGARIS* Vol. II. Pl. XXXVII.
BLACKBIRD.

A resident and very generally distributed species, both in our islands and on the European continent.

87. *MERULA TORQUATA* Vol. II. Pl. XXXVIII.
RING-OUZEL.

A summer visitant, which frequents rocky situations in Wales, the northern parts of England, Scotland, &c. Winters in Africa.

Genus *ORBOSCINCLA*.

A form very distinct both from *Merula* and *Turdus*, of which five, six, or seven species, all inhabitants of the Old World, are known to exist. They have a very wide range, some being found in Asia and its islands, and others in Australia. They are shy and solitary in their habits, often frequenting rocky and scrubby situations in the midst of forests.

88. *ORBOSCINCLA AUREA* Vol. II. Pl. XXXIX.
WHITE'S THRUSH.

A native of the Altai, the Himalayas, and China. Single individuals occasionally migrate westward to the continent of Europe and to England, wherein about ten or twelve examples have been killed, the particulars respecting several of which will be found in the letterpress opposite the Plate of the species.

Genus *CICHLORERYS*.

An eastern form, the type of which is the well-known Siberian Thrush.

89. *CICHLORERYS SIBIRICUS* Vol. II. Pl. XL.
SIBERIAN THRUSH.

Quite an accidental visitor, only a single instance of its being killed here being on record.

Family *PYCNONOTIDÆ*.

The members of this family are nearly allied to the great group of Honey-eaters (*Meiophagidæ*) of Australia. Many species inhabit Africa and India.

Genus *PYCNONOTUS*.

90. *PYCNONOTUS CAPENSIS*.
Gold-vented Thrush.

A native of Spain and part of Africa; once killed in Ireland

the particulars of which see Thompson's 'Birds' of that country, and Yarrell's 'History of British Birds,' vol. i. p. 224: "erroneously identified by those authors," says Mr. Harting, "with *P. aurigaster* of Vieillot."

Family CINCLIDÆ.

Many opinions are extant among ornithologists respecting the natural position of this very singular group of birds: one places them near *Enicurus*, *Grallina*, &c.; another fancies they are allied to *Troglodytes*; and a third, to the Thrushes. Of the eleven or twelve known species, seven or eight inhabit the northern regions of the Old World; a single, or at the utmost two, frequent the same regions of the New; and two are found among the cataracts and rocky streams of the Andean ranges. But it is in Europe and Asia that Water-Ouzels most abound, the watercourses of the great Himalaya Mountains and their continuations being especially frequented by them. Europe is tenanted by three, one of which inhabits the British Islands, and a second comes to them occasionally from Norway.

91. *CINCLUS AQUATICUS* Vol. II. Pl. XLI
WATER-OUZEL OR DIPPER.

A resident in Britain, frequenting the turbulent waters and mill-streams of its hilly districts.

92. *CINCLUS MELANOGASTER* Vol. II. Pl. XLII.
BLACK-BELLIED WATER-OUZEL.

A native of Norway, Sweden, and probably other parts of Northern Europe. In England it has been several times killed in Norfolk, Suffolk, and Lincolnshire; but these must be regarded as accidental occurrences.

Family SAXICOLINÆ.

A family of insectivorous birds, comprising many Old World forms inhabiting Europe, Asia, and Africa. They vary in size from a Thrush to a Wheatear or a Stone-Chat.

Genus PETROCOSSYPHUS.

A genus of rock-loving birds common to the continent of Europe, North Africa, India, China, and the Philippine Islands.

93. *PETROCOSSYPHUS CYANUS* Vol. II. Pl. XLIII.
BLUE ROCK-THRUSH.

Has been once killed in Ireland, the particulars respecting which

and the countries the bird inhabits will be gained by reference to the letterpress opposite the Plate whereon the species is figured.

Genus PETROCINCLA.

This form is scarcely separable from *Petrocossyphus*; the members of both are distributed over nearly the same parts of the world.

94. PETROCINCLA SAXATILIS Vol. II. Pl. XLIV.

ROCK-THRUSH.

A purely accidental visitor to Britain, only one, or at the utmost two, examples having been seen therein. The true home of the species is Southern and Eastern Europe, Palestine, and North Africa.

Genus SAXICOLA.

The Wheatears, as the members of this genus are frequently called, are Old-World birds, inhabiting Europe, Africa, India, and China. They are alert in their actions, and dwell almost exclusively in rocky and sterile places where little water occurs, that element not apparently being necessary to their existence.

95. SAXICOLA CENANTHE Vol. II. Pl. XLV.

WHEATEAR.

An early spring visitant from Africa. Breeds in various parts of the three kingdoms, after which both old and young retire to winter in warmer climates; some individuals proceed to high northern latitudes—Greenland, and Arctic America.

Genus PRATINCOLA.

An Old-World form, the members of which are more arboreal than the Wheatears, frequently perching on shrubs, bushes, and grasses. They are distributed over Europe, Africa, India, and China.

96. PRATINCOLA RUBETRA Vol. II. Pl. XLVI.

WHIN-CHAT.

Strictly a migrant from the south, arriving at the end of April, and, after breeding, departing again to whence it came: while here, it is very generally distributed.

97. PRATINCOLA RUBICOLA Vol. II. Pl. XLVII.

STONE-CHAT or FURZE-CHAT.

A resident bird, inhabiting commons and heath-covered districts; breeds and remains in its chosen situation from year's end to year's

end. It is also found on the continent of Europe, and probably in some parts of Asia.

Genus ERYTHACUS.

Of this genus there are three species, the well-known Robin (*E. rubecula*) of Europe, and the *E. akahige* and *E. komadori* of Japan.

98. ERYTHACUS RUBECULA Vol. II. Pl. XLVIII. ROBIN.

This familiar denizen of our gardens, shrubberies, and woodlands is a constant resident with us, is dispersed over the three kingdoms, and is a general favourite. It is also found on the continent of Europe, in North Africa, and the Islands of Madeira and Teneriffe, in which latter island I have myself shot examples.

Genus CYANECULA.

Two or three very differently marked birds of this form exist in Europe, Africa, India, and China. By some writers they are considered to be one and the same species; by others each has been regarded as distinct. In habits and disposition the Bluethroats are peculiar, they exhibit none of the bold daring of the Wheatear and the Robin; neither do they sit on a twig and show their breasts like the Whin- and Stone-Chats; on the contrary they skulk among bushes and dense herbage of hill-sides, or among the grasses in a meadow, concealing rather than showing their beautiful colouring, as if conscious that its exposure would be adverse to their well-being.

99. CYANECULA SUBCICA Vol. II. Pl. XLIX. RED-THROATED BLUEBREAST.

A lovely little bird, which lives in eastern Europe and probably in Africa. In the summer it is to be seen on the Dovrefjeld, in the winter in the sunny south. It sometimes pays England a visit, and hence is included in our avifauna, but its occurrence must be regarded as purely accidental.

100. CYANECULA LEUCOCYANA Vol. II. Pl. L. WHITE-THROATED BLUEBREAST.

A native of France and Southern Europe, accidental in England.

Genus RUTICILLA.

Redstarts, as the members of this genus are trivially called, not only inhabit Europe, but are abundant in India and China.

101. *RUTICILLA PRÆNICURA* Vol. II. Pl. LI.

REDSTART.

Arrives from the south in April, frequents our gardens, breeds in our apple-trees, and renders its visits agreeable by its pleasing song, the sprightliness of its actions, and the beauty of its plumage. It also visits the southern and central parts of Europe generally.

102. *RUTICILLA TITHYS* Vol. II. Pl. LII.

BLACK REDSTART.

A native of Central Europe and the countries to the southward and eastward thereof, pays England almost annually a visit during the months of autumn, when other migrants have gone south to winter in Africa; still it must be regarded as an accidental visitor only. With us it frequents rocky situations; but on the Continent it takes up its abode in gardens, just as the Redstart does here.

Genus *AEDON*, *Boie*.

The members of this genus are inhabitants of the Old World, where their head quarters appear to be Eastern Europe and Northern Africa.

103. *AEDON GALACTODES* Vol. II. Pl. LIII.

RUFIOUS SEDGE WARBLER.

Spain, Greece, Asia Minor, and North Africa are among the countries frequented by this species, which, having been only twice killed in England, must be enumerated among its rarest visitors.

"The Rufous Sedge Warbler is evidently only a summer migrant in the north of Algeria. On my return from the Mزاب country in May, I saw scores where there had not previously been one, and generally away from water. It has a curious habit of raising its tail; it is hardly ever seen in any other position. Our common British Nightingale has the same habit in a less degree; but with the Rufous Sedge Warbler it appears to be natural to keep it raised: whether the bird is in motion or at rest, the tail is only depressed at intervals."—J. H. GURNEY, jun.

Family *ACCENTORINÆ*.

A group of Old-World birds, some species of which inhabit Europe and Asia, from the British Islands to Kamtschatka and Japan. They have been subdivided into three genera, *Accentor*, *Spermolegus*, and *Tharrhaleus*, the types of the first and third of which are natives of Britain, namely, *A. alpinus* and *T. modularis*. I have, however, kept them both in the genus *Accentor*.

Genus *ACCENTOR*.104. *ACCENTOR ALPINUS* Vol. II. Pl. LIV.

ALPINE ACCENTOR.

Common in Switzerland and other rocky countries of Southern and

Eastern Europe. An accidental visitant to England, where it has been killed or seen about a dozen times.

105. ACCENTOR MODULARIS Vol. II. Pl. LV.

HEDGE-ACCENTOR or HEDGE-SPARROW.

Resident in the three kingdoms; common in gardens. A tame, pleasing, and harmless little bird. Lives on insects. Inhabits most parts of Europe and Malta, where I have shot examples.

Family SYLVIIDÆ.

Comprises a very large number of species, which are inhabitants of the older known portion of the globe. About fifteen are enumerated in the British avifauna, as belonging to the genera *Sylvia*, *Curruca*, *Luscinia*, *Melizophilus*, *Phyllopneuste*, *Ficedula*, *Regulus*, *Reguloides*, &c.

Genus LUSCINIA.

A very well-defined genus, comprising two species, both of which are summer birds in Central Europe. One of them, our well-known Nightingale, comes to us in spring, and retires again in autumn. It has been ascertained that both species winter in more southern climes; but we really know little respecting the extent of their range in that direction.

106. LUSCINIA PHILOMELA Vol. II. Pl. LVI.

NIGHTINGALE.

A summer migrant to the southern and central parts of England, but not to Scotland or Ireland. A full account of this charming bird will be found opposite the Plate on which it is represented.

Genus SYLVIA.

In the present work both the Whitethroats have been regarded as typical examples of the genus *Sylvia*. These and some other species abound in Europe during the months of summer; others, again, are spread over Northern Africa, India, and China. Their food consists of insects and berries.

107. SYLVIA CINEREA Vol. II. Pl. LVII.

WHITETHROAT.

When spring assumes her most cheery aspect, our hedges put forth their leafy verdure, and the goose-grass ramifies among the herbage of the ditches, the saucy Whitethroat makes its appearance, and, after spending the summer and rearing its brood, departs again in autumn to winter in warmer climes. It is, therefore, a true sum-

mer migrant, which visits all the three kingdoms, but is rather scarce in some parts of Scotland.

108. SYLVIA CURRUCA Vol. II. Pl. LVIII.

LESSER WHITETHROAT.

A summer migrant from the south, which arrives rather later than the preceding species, betakes itself to gardens and woodlands, sings its garrulous peculiar song while searching for aphides and other insects among the leaves of the cherry- and other trees of the garden or forest, is spread over the central portion of England, is rare in Cornwall and Scotland, and has not been seen in Ireland.

Genus MELIZOPHILUS.

Mr. G. R. Gray enumerates, in his recently published 'Hand-list of Birds,' three species of this genus; but I feel assured that our well-known Dartford Warbler must stand as its sole representative.

109. MELIZOPHILUS PROVINCIALIS Vol. II. Pl. LIX.

DARTFORD WARBLER.

A stationary but very local species in the south of England, rare in the midland and northern counties, unknown in Scotland and Ireland. Evinces a preference for heathy lands, particularly those clothing the greensand; hence it is abundant in some parts of Surrey, Sussex, and Hampshire; while on the Continent, where this kind of formation does not exist, it is either scarce or entirely absent. Is extremely shy and reclusive in its habits. Breeds in May.

"Are you aware," says Mr. Gatcombe, in a letter dated Dec. 20, 1868, "that the Dartford Warbler is tolerably common in the furze-brakes near Lyme Regis? A few days since I had a very nice specimen sent me in the *flesh* from that place; and the sender informed me that he had lately killed five, but the one forwarded was the *only one* he could find among the long gorse. What a great pity that four of these interesting birds have been killed and lost!"

Genus CURRUCA.

The members of this genus possess considerable vocal powers, are more shy or distrustful in their habits than the Whitethroats, and are less sprightly in their manners. Europe, North Africa, Asia Minor, Western India, and China are frequented by the members of this genus, two of which visit England during the months of summer.

110. CURRUCA ATRICAPILLA Vol. II. Pl. LX.

BLACKCAP.

Winters in North Africa, and migrates to us in April in considerable numbers, which, after spending the summer and breeding here, wing their way to whence they came. Common all over England,

rare in Scotland and in Ireland. As a songster it almost rivals the Nightingale.

111. CURRUCA ORPHEA Vol. II. Pl. LXI.
ORPHEAN WARBLER.

One specimen at least has been killed in Britain, for the particulars of which *vide* the letterpress opposite the plate on which it is figured.

112. CURRUCA HORTENSIS Vol. II. Pl. LXII.
GARDEN-WARBLER.

An unobtrusive and plainly coloured bird; has a loud garrulous song; arrives in April, when the nettles and other herbage are sufficiently dense and the leaves of the trees sufficiently forward to screen it from sight. Common in England and the south of Scotland, but seems to be more rare in the north of that country; and in Ireland, according to Thompson, it is extremely so.

Genus TROGLODYTES.

In the Old World the northern regions are those that are principally inhabited by the members of this genus; in the New they range from the northern to nearly the southern extremity of the great continent of America. They are pert, lively little birds, which differ from the true *Sylvia* in many particulars, rendering it very difficult to assign them a place affinitively in any of the proposed systems.

113. TROGLODYTES EUROPEUS Vol. II. Pl. LXIII.
COMMON WREN.

As implied in its specific appellation, this bird is a native of Europe, over which it is very generally dispersed and strictly stationary, inasmuch as it keeps in the vicinity of its breeding-place from year's end to year's end.

Family CERTHIIDÆ.

The members of this singular bark-loving family, which are but few in number, frequent the temperate regions of both the Old and the New World. Four species inhabit the great Himalaya mountains; and of these some visit the plains of India, and extend their range eastward to Japan. In America there are two, which are found in all parts of that country from the United States to Mexico.

Genus CERTHIA.

114. CERTHIA FAMILIARIS Vol. II. Pl. LXIV.
TREE-CREEPER.

A resident species, generally distributed over the three kingdoms, and braving with apparent impunity the coldest of our winters.

Genus PHYLLOPNEUSTE.

The trivial name of Leaf-Warblers has of late years been applied to the members of this genus, a term which I regret not having employed in the body of the work. These delicate birds are so generally dispersed over the northern and temperate countries of the Old World that they may be regarded as universally diffused. They are all more or less migratory, moving backward and forward in accordance with the course of the sun. Three species arrive in Britain early in the spring.

115. PHYLLOPNEUSTE TROCHILUS Vol. II. Pl. LXV.
WILLOW-WREN.

Arrives from the south about the middle of April, and diligently commences to search for insects among the newly expanded leaves of the willow and other trees, and, after making its dome-shaped, grassy, feather-lined nest on the ground and rearing its young, retires to whence it came upon the earliest access of cold weather. When here it is generally dispersed over the three kingdoms.

116. PHYLLOPNEUSTE RUFA Vol. II. Pl. LXVI.
CHIFFCHAFF.

One of the earliest spring migrants from the sunny south, many individuals frequently appearing in March. Solitary instances are on record of its having been seen here during the winter months; and as I found it at the same season at Malta, it is evidently a more hardy bird than the Willow-Wren, from which it differs in the character of its song and in the places selected for the site of its dome-shaped nest, which is frequently built in a bush. It is very generally dispersed, but somewhat less numerous in Scotland than in England.

117. PHYLLOPNEUSTE SIBILATRIX Vol. II. Pl. LXVII.
WOOD-WREN.

Although I have kept this bird in the present genus, it has just claims to generic distinction, its much longer wings, peculiar song, and brighter colouring not being quite accordant with either the Willow-Wren or the Chiffchaff—and, indeed, has had that of *Sibilatrix* assigned to it by Professor Kaup. With us it is a true summer visitant, arriving later than the two birds above mentioned, its tremulous sibilant note not being usually heard until May. Although commonly dispersed over England and Scotland, it is rare in Ireland. Breeds on the ground, generally making a nest of grasses only. Departs in autumn, and winters in Africa.

Genus REGULOIDES.

Comprises a series of small eastern birds allied to *Phyllopneuste* and *Regulus*. The species which has paid England occasional visits

is an inhabitant of Europe and Northern India, where others of the form are also found.

118. *REGULOIDES SUPERCILIOSUS* Vol. II. Pl. LXVIII.

YELLOW-BROWED WARBLER.

The particulars of the capture of this species in England, as recorded by Mr. Harting, are:—

“One, Hartley Point, Northumberland: Hancock, Ann. and Mag. Nat. Hist. vol. ii. p. 310; Blyth, Zoologist, 1863, p. 8329; Yarrell, Hist. of Brit. Birds, vol. i. p. 380.

“One, Charlton Kings, near Cheltenham, 11th Oct. 1867: Gould, Ibis, 1869, p. 128.”

Hab. Northern Asia, India, Nepaul, China, Japan, and Formosa. Has occurred accidentally in Sweden, in Heligoland, and Berlin, and near Leyden.

119. *REGULOIDES CALENDULA*.

Ruby-crowned Wren.

All that is known respecting the occurrence of this species in our islands is comprised in the following note from Mr. R. Gray's 'Birds of Western Scotland':—

“In the summer of 1852, Dr. Dewar, of Glasgow, shot a specimen of this North-American species in Kenmore Wood, on the banks of Loch Lomond. The bird was exhibited at a Meeting of the Natural-History Society of Glasgow on the 27th of April, 1858, and identified by me. Dr. Dewar stated that he had found it in company with a large flock of Golderests, and that he had shot a dozen birds altogether before he recognized the differences which this one presented. Dr. Bree, in his work on the birds of Europe, states that the Rev. H. B. Tristram has a Ruby-crowned Kinglet in his possession, which was given him in the flesh, and which was killed by a Durham pitman, in 1852, in Brancepeth woods; from this it would seem that a second example has occurred in this country.

Genus *REGULUS*.

The Golden-crested Wrens or Kinglets are a charming group of small birds inhabiting the northern regions of the Old and New Worlds. In their actions and in their mode of nidification they remind us of the *Paridae*, or Tits; but no one has yet, I believe, removed them from among the true Sylvian birds, nor shall I do so in the present work. England is tenanted by two species, which, with one or two others, are all that are known in the Old World; in the new portion of the globe there may be as many more. In disposition they are as tame as they are sprightly and pleasing in their actions. They suspend a neat hammock-shaped nest beneath the branches of fir or other trees. Their eggs are numerous; and the progeny soon acquire the plumage of the adult.

120. *REGULUS CRISTATUS* Vol. II. Pl. LXIX.
GOLDEN-CRESTED WREN.

A native of Europe, and doubtless other countries to the south and eastward. With us it is a resident species, and frequents alike the three kingdoms.

121. *REGULUS IGNICAPILLUS* Vol. II. Pl. LXX.
FIRE-CRESTED WREN.

Very generally dispersed over the continent of Europe and North Africa; it is purely an accidental visitant to Britain.

Genus *FICEDULA*.

A form which appears to be intermediate between the Willow-Wrens and Sedge-birds.

122. *FICEDULA HYPOLAIS* Vol. II. Pl. LXXI.
YELLOW-BROWED WARBLER.

An accidental visitor to England and Ireland; common in Holland and other parts of Europe and North Africa, from which latter country it migrates north in spring, filling the dwarf woods and osier-beds of France and Holland with its melodious voice.

Family *CALAMODYTIDÆ*.

Ornithologists will, I am sure, agree with me in considering that the Sedge-birds constitute a very distinct family. The numerous species, which have been divided into many genera, are very generally distributed over the older-known portion of the earth's surface. They are semiaquatic in their habits; the greater number frequent both large and small beds of sedges and other herbage growing in the vicinity of water, and feed upon insects. They are well represented in the British Islands, over which the species are generally distributed. In the present work these birds have been classed under the generic titles of *Acrocephalus*, *Calamoherpe*, *Calamodyta*, *Lusiniopsis*, and *Locustella*.

Genus *ACROCEPHALUS*.

The members of this genus are the largest birds of the family; and one or other of them form part of the avifaunæ of Europe, Asia, Africa, and Australia.

123. ACROCEPHALUS TURDOIDES Vol. II. Pl. LXXII.

THRUSH WARBLER.

Besides inhabiting the continent of Europe and the neighbouring countries, the Thrush Warbler finds its way to England, as will be seen on reference to the letterpress opposite the Plate on which the species is represented. It can only be regarded as an accidental visitor.

Genus CALAMOHERPE.

What has been said respecting the distribution of the members of the last genus is equally descriptive of those of the present one.

124. CALAMOHERPE ARUNDINACEA Vol. II. Pl. LXXIII.

REED-WARBLER.

A true migrant, arriving late in April. Nests in the lilac and other trees of the shrubberies, and in most of the gardens of the central portions of England; its nest is also frequently found among reeds and bushes overhanging water. Besides our own country, this species frequents Central Europe and Northern Africa.

125. CALAMOHERPE PALUSTRIS Vol. II. Pl. LXXIV.

MARSH-WARBLER.

Supposed to inhabit many parts of England, and to have been often confounded with the preceding; said to arrive at the same time and to be more exclusively aquatic in its habits. Is considered always to have lighter-coloured legs and to present other, minor differences, which may be more easily seen by consulting the respective Plates than by the most minute description. Should it ultimately prove that the *C. palustris* is found here, it must be regarded as a regular summer visitant.

Genus CALAMODYTA.

The members of this genus are smaller in size than the *Calamoherpe*, and are less uniform in the colouring of their plumage. The situations affected by both are identical, reeds and aquatic herbage being apparently necessary to their existence; at all events it is in such situations that they pour forth their querulous songs both by day and by night. The *Calamodyte* are very generally distributed over the temperate portions of Europe, Africa, and Asia.

126. CALAMODYTA PHRAGMITIS Vol. II. Pl. LXXV.

SEDGE-WARBLER, or CHAT.

A bird of the summer, which arrives early in May and spreads itself over England and Ireland, but not, according to Sir William Jardine and Macgillivray, visiting Scotland. After breeding, it departs again to Morocco or some other part of Africa.

127. *CALAMODYTA AQUATICA* Vol. II. Pl. LXXVI.
AQUATIC WARBLER.

Somewhat rare in Central and Southern Europe. Has been killed two or three times in England, where it must be regarded merely as an accidental visitor.

Genus *LUSCINIOPSIS*.

According to Mr. Gray's 'Hand-list of Birds,' two generic titles have been proposed by Bonaparte for the single known species of this form, viz. *Pseudoluscinia* and *Lusciniopsis*; the latter term has been employed in the present work.

128. *LUSCINIOPSIS LUSCINOIDES* Vol. II. Pl. LXXVII.
SAVI'S WARBLER.

Has many times been killed in England, where, however, it must be considered a rare visitant, and principally to the eastern counties.

Genus *LOCUSTELLA*.

About five species of this genus are known; of these one or other frequent Central and Southern Europe, Asia, Siberia, and China.

129. *LOCUSTELLA AVICULA* Vol. II. Pl. LXXVIII.
GRASSHOPPER WARBLER.

A yearly summer visitant to England, some parts of Scotland, and Ireland, in all of which countries it breeds, and afterwards stealthily departs southwards in autumn.

Family MOTACILLIDÆ.

The *Motacillidæ* are among the most graceful of birds, and, from their familiarity, tameness of disposition, and the sprightliness of their actions, are great favourites with every one who lives in the country. They have been judiciously separated into two distinct groups, the Pied and the Yellow Wagtails, the generic term *Motacilla* being retained for the former, and that of *Budytes* for the latter. There is also another form, to which the term *Calobates* has been applied; of this only one or two species have yet been discovered; of the other genera many are known. All, both Pied and Yellow, are strictly confined to the Old World, more particularly its northern portions.

Genus MOTACILLA.

Two species of this form inhabit Britain—one of which is resident, the other migratory; in India there are three or four; and in China and Japan we meet with as many more. Their natural province is the ground; but they readily perch on the branches of trees.

130. MOTACILLA YARRELLI Vol. III. Pl. I.
PIED WAGTAIL.

A resident species in the three kingdoms, breeds freely in the neighbourhood of dwellings, and is one of the foster-parents of the young Cuckoo.

131. MOTACILLA ALBA Vol. III. Pl. II.
WHITE WAGTAIL.

A common migrant on the continent of Europe, but only a rare straggler in Britain, in various parts of which it has been seen and taken.

Genus BUDYTES.

The Yellow Wagtails, as already stated, frequent the same countries as the Pied, and are equally numerous in species. Of the three pertaining to the British avifauna, one is a constant spring visitor, the other two occur but seldom.

132. BUDYTES RAYI Vol. III. Pl. III.
YELLOW WAGTAIL.

Arrives in April, spreads over our fields and meadows, breeds, and returns to Africa for the winter. Generally distributed over the three kingdoms.

133. BUDYTES FLAVA Vol. III. Pl. IV.

GREY-HEADED WAGTAIL.

A common bird on the Continent, but so rare with us that it can only be regarded as an accidental visitor.

134. BUDYTES CINEREOCAPILLA Vol. III. Pl. V.

GREY-CAPPED WAGTAIL.

A bird which passes from Africa, by way of Malta, through Central Europe to breed on the Dovrefjeld and other northern parts of this quarter of the globe. Has been killed only once or twice in England, and consequently is only an accidental visitor.

Genus CALOBATES.

This peculiar form of Wagtail is more elegant in appearance than the members of either of the two preceding genera; its legs are shorter, and its tail longer; in colour it closely assimilates to the members of the genus *Budytes*. While the *Motacilla* are circumscribed in the range of their area, the *Calobates sulphurea* is found at one season or another in nearly every portion of the Old World, Australia and New Zealand excepted.

135. CALOBATES SULPHUREA (Summer plumage). Vol. III. Pl. VI.

(Winter plumage). Vol. III. Pl. VII.

GREY WAGTAIL.

A resident in the three kingdoms. Evinces a preference for mountainous districts. Breeds in May, constructing, like the others, a cup-shaped nest, and laying four or five eggs.

Family ANTHIDÆ.

PIPITS.

We have here a group of birds which are more generally spread than the Wagtails, inasmuch as they are diffused over both divisions of the globe, but which are far less numerous in the older portion than the new. Like most other large groups they have been divided and subdivided into many genera; those frequenting England I have retained under the old genus *Anthus*, and commence with one of the finest known species.

136. ANTRUS RICHARDI Vol. III. Pl. VIII.

RICHARD'S PIPIT.

An accidental visitant to the British Islands, where it is generally seen in winter and spring. The other countries frequented by it are Continental Europe, India, China, and in fact the whole of the temperate regions of the Old World.

137. ANTHUS CAMPESTRIS Vol. III. Pl. IX.
TAWNY PIPIT.

Common in the champagne parts of France and other portions of Central Europe. Has been killed in England, and may therefore be regarded as forming part of our avifauna; but its visits must be considered purely accidental.

138. ANTHUS OBSCURUS Vol. III. Pl. X.
ROCK-PIPIT.

A stationary species, frequenting the shores and rocky parts of Britain—sparsely in Norfolk, but plentifully in Western Scotland and all the western islands, including the Outer Hebrides, Monach Isles, Haskar Rocks, and St. Kilda—keeping strictly to the sea-margin (*R. Gray*).

139. ANTHUS SPINOLETTA Vol. III. Pl. XI.
VINOUS PIPIT.

A bird of France and the southern and eastern parts of Europe. Although it has been killed on our coast many times, it must be considered an uncertain and accidental visitor.

140. ANTHUS LUDOVICIANUS.

See the remarks respecting this species in my account of the Vinous Pipit (*Anthus spinoletta*).

141. ANTHUS CERVINUS Vol. III. Pl. XII.
RED-THOATED PIPIT.

Mr. Harting has recorded, in the 'Field' for the 26th of August 1871, the occurrence of two examples of this bird in our islands—one at Unst in Shetland on the 4th of May 1854 (now in the collection of Mr. Bond), and another in September of the same year at Freshwater in the Isle of Wight.

142. ANTHUS PRATENSIS Vol. III. Pl. XIII.
MEADOW-PIPIT OR TITLARK.

A truly resident species, breeding in all the moorland counties of the three kingdoms, often the foster-parent of the young Cuckoo in this and the other European countries in which it is found. A large race of Meadow-Pipits arrive on our south coast in spring, and, it is believed, spread themselves over the central and perhaps the northern portions of the country.

143. ANTHUS ARBOREUS Vol. III. Pl. XIV.
TREE-PIPIT.

A summer migrant to England and Scotland, but "not," says Thompson, "satisfactorily known as an Irish species;" arrives in spring, and departs in September.

Family ALAUDIDÆ.

The Larks constitute a very large family of birds, and are perhaps less understood than any other group in the whole range of ornithology. Those species which frequent Britain are arranged in the genera *Alauda*, *Galerita*, *Otocoris*, *Melanocorypha*, and *Calandrella*. They are chiefly inhabitants of the Old World. Of the genus *Alauda*, under which term all that were known when Linnaeus wrote were included, our well-known Sky-Lark is a typical example. In America these birds are but feebly represented.

Genus ALAUDA.

144. ALAUDA ARVENSIS Vol. III. Pl. XV.
SKY-LARK.

A strictly resident species in Britain, the numbers of which are greatly increased by arrivals from Scandinavia in autumn, the whole forming immense flocks in the winter season. This species is also widely dispersed over Central and Southern Europe; and its range may even extend further in those directions. In the preceding portion of this introduction I have mentioned the great destruction of small birds which occasionally takes place from the severity of the weather, in further confirmation of which I may here give a passage from a note received by me from John St. Aubyn, Esq., of Pendeen, in Cornwall, dated January 15, 1867:—"Owing to the severity of the cold, Larks and other small birds are beginning to die rapidly of starvation, judging from the number my children pick up."

145. ALAUDA ARBOREA Vol. III. Pl. XVI.
WOOD-LARK.

A cheery little songster, very local in its habitat, breeds in many of the English counties; supposed to migrate from us to the southward in the winter; but Mr. Blake Knox states that it is abundant at that season in the county of Dublin, and also that it breeds there. It is about as numerous in Scotland as it is in England; and Mr. Harting states it has been found as far north as the Orkney Islands.

Genus GALERITA.

146. GALERITA CRISTATA Vol. III. Pl. XVII.
CRESTED LARK.

A bird of France and many other parts of the European continent, and even of other more distant countries. Although common on the roads between Calais and Boulogne, it seldom crosses the Channel to pay Albion's shores a visit; here, indeed, it is so scarce that it must be enumerated among our accidental visitors.

Genus *Otocoris*.

Of this ornamental section of the Larks there are about ten known species, six or seven inhabiting the Old World, and three the New. All are more or less ornamented with small pencilled plumes springing from above the eye, and have much of their plumage suffused with yellow and pinky brown. Their head quarters are eastern Europe, Palestine, Afghanistan, the Altai, and the highlands of Asia generally.

147. *Otocoris alpestris* Vol. III. Pl. XVIII.
SHORE-LARK.

This bird has appeared here so frequently of late that it may almost be termed a regular winter visitant. Lord Lilford has recorded, in the 'Zoologist' for 1852, an instance of its nesting in Devonshire.

Genus *Melanocorypha*.

A little group of thick-billed Larks, comprising five or six species; almost exclusively inhabit the central and eastern regions of Asia.

148. *Melanocorypha calandra* Vol. III. Pl. XIX.
CALANDRA LARK.

A common species in most of the champaign parts of Central and Southern Europe, but a purely accidental visitor to England, two instances only of its occurrence here being on record, both in Devonshire.

149. *Melanocorypha leucoptera* Vol. III. Pl. XX.
WHITE-WINGED LARK.

The native country of this bird is Siberia and the eastern portions of Europe. In a single instance only has it been killed in England, for the particulars of which see the letterpress opposite the plate.

Genus *Calandrella*.

150. *Calandrella brachydactyla* Vol. III. Pl. XXI.
SHORT-TOED LARK.

A native of Central and Southern Europe, India, and China. Only four or five instances of its having been killed in England have been placed on record; consequently it must be regarded as purely an accidental visitant.

Family *Emberizidæ*.

The members of this great group of birds extend over Europe, Asia, and Africa, to which sections of the globe they appear to be confined, inasmuch as no true Bunting has yet been discovered in

America, Australia, New Zealand, or, I believe, the islands of the Eastern archipelago. The numerous species of which the family is composed are divisible into many genera; and the ten species recognized as inhabiting Britain have been divided into six or seven. The food of all, both of those which frequent our islands and of those found in other countries, is of a mixed character, seeds of various kinds constituting its main portion; but insects and their larvæ are largely partaken of, and probably form at first the sole nourishment of the young.

Genus EMBERIZA.

151. EMBERIZA CITRINELLA Vol. III. Pl. XXII.
YELLOWHAMMER or YELLOW BUNTING.

Very generally dispersed over the three kingdoms; breeds and rears its young between spring and midsummer. British specimens differ considerably in the colouring of their plumage, and are very much less in size than continental examples.

152. EMBERIZA CIRLUS Vol. III. Pl. XXIII.
CIRL BUNTING.

A resident, but somewhat local; breeds in most of our southern counties, particularly in chalky districts, and annually as near to London as Cookham, in Berkshire; very scarce in Scotland, and never seen in Ireland.

153. EMBERIZA RUSTICA Vol. III. Pl. XXIV.
RUSTIC BUNTING.

The native habitat of this bird is the eastern part of Europe and the neighbouring countries. Has been killed near Brighton, for the particulars of which circumstance see 'The Ibis' for 1869, p. 128, and the letterpress facing the figure in the present work.

154. EMBERIZA PUSILLA Vol. III. Pl. XXV.
DWARF BUNTING.

Inhabits Northern and Eastern Europe, Siberia, China, and the Himalaya Mountains. Has been once killed in England, *vide* 'Ibis,' 1865, p. 113, and the account opposite the present plate.

Genus CRITHOPHAGA.

155. CRITHOPHAGA MILIARIA Vol. III. Pl. XXVI.
COMMON BUNTING.

A truly British species, which is also found in Central and Southern Europe, Northern Africa, Asia Minor, and Persia. Breeds in our three kingdoms; is solitary in its habits, being generally seen sitting

alone on the topmost twig of a hedge-row. The sole representative of its genus, or genera; for it has had no less than five generic terms applied to it—*Emberiza*, *Spinus*, *Cynchramus*, *Miliaria*, and *Cri-thophaga*.

Genus GLYCISPINA.

Comprising about six or seven species inhabiting Europe, Asia, and Africa.

156. GLYCISPINA HORTULANA Vol. III. Pl. XXVII.

ORTOLAN BUNTING.

A bird which ranges very extensively over Europe, being common from the shores of the Mediterranean to the Dovrefeld in Norway; in the latter country it breeds in abundance. It is but an accidental visitor to England, has once only, I believe, been killed in Scotland, and never in Ireland.

Genus EUSPIZA.

157. EUSPIZA MELANOCEPHALA Vol. III. Pl. XXVIII.

BLACK-HEADED BUNTING.

Common in Eastern Europe, Persia, and Western-India. The male is a beautiful showy bird, the female more plainly dressed, as will be seen on reference to my plate, which represents an individual of the latter sex, said to have been killed on Brighton race-course on the 3rd of November, 1868.

Genus SCHENICOLA.

The members of this marsh-loving section of the Buntings are about three in number, all inhabitants of Europe and the countries to the eastward of it.

158. SCHENICOLA ARUNDINACEA Vol. III. Pl. XXIX.

REED-BUNTING.

A resident and generally distributed species; breeds in the Thames aits and in the osier-beds of other rivers.

Genus CENTROPHANES.

Comprises about five species of very interesting mountain-loving birds, mostly American, and always in high northern latitudes, the species inhabiting Lapland occasionally paying the British Islands a visit.

159. CENTROPHANES LAPPONICA Vol. III. Pl. XXX.

LAPLAND BUNTING.

A rather frequent winter visitant, often caught in the clap-nets of the bird-catchers.

Genus PLECTROPHANES.

A genus composed of the single species known by the trivial names of Snow-Bunting and Snowflake.

160. PLECTROPHANES NIVALIS Vol. III. Pl. XXXI.

SNOW-BUNTING or SNOWFLAKE.

This very interesting bird is an autumnal and winter visitant to the British Islands. Its summer quarters are the countries near to and, not unfrequently, within the arctic circle. It breeds in Lapland, and probably in suitable situations in all other countries of a similar latitude round the globe.

Genus ZONOTRICHIA.

A purely American form, comprising about twelve known species, one of which has strayed across the Atlantic to the British Islands.

161. ZONOTRICHIA ALBICOLLIS.

White-throated Sparrow of American authors.

"A female specimen of this bird," says Mr. R. Gray, in his 'Birds of Western Scotland,' "was shot near the Broadhill, on Aberdeen links, on the 17th of August, 1867." This specimen was subsequently sent to Professor Newton for exhibition at the Meeting of the Zoological Society of London on the 27th January, 1870. More recently a second example, taken near Brighton, was exhibited at a Meeting of the same Society by George Dawson Rowley, Esq.

Family FRINGILLIDÆ.

The Finches are a family of birds comprising a larger number of members than the Buntings and the Larks, and are even more widely dispersed over the earth's surface than those of any other group. In a work limited to the birds of our own islands, it would be out of place to give an enumeration of even the genera into which they have been separated; and I therefore confine my remarks to such forms as are found in Britain.

Subfamily FRINGILLINÆ.

Genus PASSER.

The true Sparrows are principally confined to the northern parts of the Old World. Asia is inhabited by several species, and Europe by four or five, two of which frequent the British Islands.

162. PASSER DOMESTICUS Vol. III. Pl. XXXII.

COMMON or HOUSE-SPARROW.

Distributed generally, but somewhat scarce in the northern parts

of Scotland. A bird whose faults are few in number, and respecting which a sad mistake was made when certain parochial authorities placed a price upon its head; for the good it effects in spring by the capture of insects far outweighs the value of the few grains of corn in a pulpy state which it occasionally takes.

163. *PASSER MONTANUS* Vol. III. Pl. XXXIII.
TREE-SPARROW.

A local species, and consequently much less widely diffused over the British Islands than the preceding: not so, however, with regard to its general distribution; for it is as common at Shanghai and other parts of China as it is in Europe. Both in Scotland and Ireland it is local and rare.

Genus FRINGILLA.

The members of this genus of pretty birds as now restricted are but few in number. They all inhabit the northern and western portions of the Old World. England is frequented by two species.

164. *FRINGILLA CELEBS* Vol. III. Pl. XXXIV.
CHAFFINCH.

A bird of general distribution over the three kingdoms; but Mr. Augustus Smith tells me that in the Scilly Islands it only appears in winter.

165. *FRINGILLA MONTIFRINGILLA* Vol. III. Pl. XXXV.
BRAMBLE-FINCH.

A true winter visitant; gregarious. Arrives in autumn, probably from Norway and Lapland, where the process of reproduction has been accomplished.

Genus CARDUELIS.

A limited genus, of which our beautiful Goldfinch is the type, and whose only associates are the *C. caniceps* of the Himalayas and the *C. orientalis* of Central India.

166. *CARDUELIS ELEGANS* Vol. III. Pl. XXXVI.
GOLDFINCH.

A resident species, common and almost universally distributed over the British Islands, and equally plentiful on the neighbouring continent.

Genus CHRYSOMITRIS.

Of this genus one species inhabits the Old World, and some seven or eight are distributed over America, from California to Chili.

167. *CHRYSEMIDIS SPINUS* Vol. III. Pl. XXXVII.

SISKIN.

As regards this beautiful little bird, Scotland has the advantage over England; for it regularly breeds there, while with us it is a winter visitant; and in Ireland it is only seen at that season.

Genus *SERINUS*.

A small group of about three species, one of which, the Common Canary, is the type. They inhabit Europe, Palestine, Madeira, and the Canary Islands.

168. *SERINUS HORTULANUS* Vol. III. Pl. XXXVIII.

SERIN FINCH.

Has been several times killed in England. Mr. Harting enumerates ten instances of its occurrence herein, viz.:—five at or near Brighton; one in Hampshire; one in Somerset; one in Sussex; one near London; and one, locality not noted.

Genus *LIGURINUS*.

Four species of this form, to which the generic names of *Ligurinus*, *Chloris*, and *Chlorospiza* have been applied, are all natives of Europe and Asia. Japan is tenanted by one, China by another, Persia by a third, while Europe is the home of the type, our well-known Greenfinch.

169. *LIGURINUS CHLORIS* Vol. III. Pl. XXXIX.

GREENFINCH.

A resident species in Britain, over which, says Mr. Harting "it is generally distributed, even to the Outer Hebrides, where it is found in North Uist and Harris and the Orkneys." On the continent of Europe it is almost equally dispersed: and I have a specimen from Erzeroum, in Persia; but I must mention that, although a fully adult male, it is of smaller size than examples killed in England.

Genus *COCCOTHAUSTES*.

I believe the bird inhabiting Europe to be the only representative of its genus; for I very much question whether the Japan bird is really different.

170. *COCCOTHAUSTES VULGARIS* Vol. III. Pl. XL.

HAWFINCH.

This bird, which has become more plentiful of late years, is a permanent resident in England. In Scotland it is more scarce, and is probably confined to its southern and eastern provinces. In Ireland it is only occasionally found.

Subfamily PYRRHULINÆ.

The well-known Bullfinch of the British Islands is placed at the head of this subfamily, of which there are about seven species, inhabiting various parts of the world. The countries where one or other of them are found are Europe, Cashmere, the Himalayan regions, Bhotan, Japan, and the Azores.

Genus PYRRHULA.

171. PYRRHULA VULGARIS Vol. III. Pl. XLII.
BULLFINCH.

172. PYRRHULA VULGARIS Vol. III. Pl. XLII.
BULLFINCH (young).

Very generally dispersed over England, Scotland, and Ireland, and, as it breeds therein, must be regarded as a stationary species.

Genus CARPODACUS.

Although the propriety of placing the Scarlet Bullfinch (*Carpodacus erythrinus*) and the Pine-Grosbeak (*Pinicola enucleator*) in the subfamily *Pyrrhulinae* may be questioned, it is certainly the best situation I can assign to them in the British avifauna.

Of the genus *Carpodacus* about nine species are known, some of which inhabit America.

173. CARPODACUS ERYTHRINUS Vol. III. Pl. XLIII.
SCARLET BULLFINCH.

A native of North-eastern Europe and Asia, only two instances of the occurrence of which in this country are on record—one near Brighton, and another in Caen Wood, Hampstead, Middlesex.

Genus PINICOLA.

Two or three very distinct species of Pine-Grosbeaks are now known, one of which frequents Norway, Lapland, and Russia; the other, *P. canadensis*, is as exclusively an inhabitant of the northern portions of America, Canada, and Hudson's Bay.

174. PINICOLA ENUCLEATOR Vol. III. Pl. XLIV.
PINE-GROSBEAK.

A very rare and inconstant visitor to the British Islands; still many instances are on record of its having been killed here.

Subfamily LOXIANÆ.

As the great forests of conifers are peculiar to the northern portions of the globe, so also are the members of the present remarkable

group of birds, whose singularly constructed bills are especially adapted for extracting the seeds from the cones of these trees. Six or seven species are all that are known; and these are spread over the Old World, from Europe, throughout Northern Asia, to Japan, and in the New World from the Arctic regions to Mexico. Two species come to Britain at uncertain intervals to breed.

Genus LOXIA.

175. LOXIA CURVIROSTRA Vol. III. Pl. XLV.
COMMON CROSSBILL.

A pretty regular visitor, if not a stationary species, in Scotland, where it sometimes breeds.

176. LOXIA PITYOPSITTACUS Vol. III. Pl. XLVI.
PARROT CROSSBILL.

Has occurred many times in Britain, and may have remained and bred; but if so, no authentic instances of such an occurrence are on record.

177. LOXIA BIFASCIATA Vol. III. Pl. XLVII.
WHITE-WINGED CROSSBILL.

Hab. Northern Europe and Asia.

Many instances are on record of this bird having been killed in the central portion of Europe; and it has frequently occurred in England, and twice in Ireland.

178. LOXIA LEUCOPTERA Vol. III. Pl. XLVIII.
AMERICAN WHITE-WINGED CROSSBILL.

Inhabits North America, and is of rare occurrence in England. Besides the specimen alluded to in my account of the species as having been found on the shore at Exmouth, Mr. Harting mentions other instances of its appearance in England, and Mr. Gray one near Jedburgh in Scotland.

Genus LINOTA.

The generic term *Linota*, proposed by Bonaparte, and that of *Linaria*, by Bechstein, appear to have been both applied to this small group of Fringilline birds, the members of which are principally, if not solely, confined to the northern parts of Europe and Asia.

179. LINOTA CANNABINA Vol. III. Pl. XLIX.
LINNET.

Resident in and very generally distributed over Britain; partially migrates south on the approach of winter.

180. *LINOTA MONTIUM* Vol. III. Pl. L.
TWITE OF MOUNTAIN-LINNET.

A winter visitant to England, remaining to breed in its northern counties, and also in Scotland. Thompson states that it is resident from the north to the south of Ireland.

Genus *ÆGIOTHUS*.

The members of this genus, familiarly known by the name of Redpoles, are inhabitants of the boreal regions of both the Old and the New World—some of them affecting very high latitudes, and even breeding within the arctic circle.

181. *ÆGIOTHUS LINARIA* Vol. III. Pl. LI.
MEALY REDPOLE.

The native countries of this bird are Norway and Lapland, whence it migrates to England and Scotland in autumn and winter. Is said not to have been seen in Ireland; but it certainly must occur there, as it also does in America.

182. *ÆGIOTHUS RUFESCENS* Vol. III. Pl. LII.
LESSER REDPOLE.

A stationary species in Britain; winters in all our southern counties, and retires to the northern parts of England and Scotland for the purpose of breeding; according to Thompson it also nests in Ireland. With respect to the range of this bird, see Professor Newton's remarks in the 'Zoologist' for 1870, p. 2223.

Family STURNIDÆ.

The Starlings and Pastors constitute a very natural group of birds which chiefly inhabit Asia, Africa, and Europe. Two, belonging to different genera, form part of the British fauna.

Genus *STURNUS*.

The true Starlings are few in number, only six species being enumerated in the most recently compiled list. They are all denizens of the northern parts of the Old World, and are found in Europe, Asia Minor, Persia, Afghanistan, and China.

183. *STURNUS VULGARIS* Vol. III. Pl. LIII.
STARLING.

184. *STURNUS VULGARIS* Vol. III. Pl. LIV.
STARLING (young).

A resident species. Breeds in the three kingdoms, and is gregarious in autumn, winter, and spring.

Genus PASTOR.

The birds of this form, which are almost peculiar to the European, African, and Asiatic portions of the globe, are at once interesting and useful,—interesting on account of their beauty, and useful from the good they effect in the countries they frequent by the destruction of the locusts and other insects and their larvæ, upon which they feed.

185. PASTOR ROSEUS Vol. III. Pl. LV.
ROSE-COLOURED PASTOR.

186. PASTOR ROSEUS Vol. III. Pl. LVI.
ROSE-COLOURED PASTOR (young).

A beautiful but unusually-coloured bird, which is very plentiful in Eastern Europe, Asia Minor, and Western India. It is merely an accidental visitor to England, Scotland, and Ireland.

Family ICTERIDÆ.

This is a purely American family, comprising considerably more than a hundred species, which are spread over the continent of America and the approximate islands. Two of them have from time to time wandered far from their native homes and sought a haven in the British Islands.

Genus AGELAIUS.

Of this section of Icterine birds about five species are known, the habitats of which are almost exclusively confined to the temperate and northern parts of the American continent.

187. AGELAIUS PHENICEUS.
Red-winged Starling.

Nine instances are on record of the occurrence of this species in Britain, namely seven in England and two in Scotland. The earliest of these appears to be the one mentioned as having been taken near London, by Albin, in his 'History of British Birds,' published in 1731-38, after which the bird seems to have remained unnoticed until the year 1843, between which date and 1871 eight others are described as having been met with in various parts of the country. The late Mr. Yarrell figured this transatlantic species in the supplement to his 'History of British Birds,' to which work, as well as those of Wilson and Audubon, I must refer my readers for its history; for, as I do not consider the bird pertains to our fauna, I have not included a figure of it in this work.

Genus STURNELLA.

A peculiar group of grass-loving birds, strictly confined to America, over which country the five known species are distributed.

188. STURNELLA LUDOVICIANA.

American Meadow-Starling.

Three instances of the occurrence of this bird in England have been recorded—Mr. Selater mentioning, in 'The Ibis' for 1861, one that had been shot at Thrandeston, in Suffolk, and another seen at South Walsham, in Norfolk, and Mr. Lloyd the third, in the 'Field' for March 1871, as having been obtained near Cheltenham many years ago; this latter specimen was seen and verified by Mr. Harting.

This species, like the preceding, being purely American, I have not included a figure of it in my work. For all particulars respecting it, see the works of Wilson and Audubon, and Mr. Selater's paper in 'The Ibis' above referred to.

Family CORVIDÆ.

The members of this family, comprising some of the very largest of the Insectorial birds, are distinguished by several characteristics, and are divided into many genera. The Crows, the Daws, the Rooks, and the Choughs may be regarded as the more typical forms, and the Jays, Pies, and Nutcrackers as the more aberrant; still they, with many other genera, are placed in this large and all but universally spread family.

Genus CORVUS.

One or other of the true Crows are dispersed over all parts of the globe, with the exception of the southern portion of America, New Zealand, and Polynesia, where none are to be found. Structurally they are considered by many writers to be among the most perfectly formed birds which exist, their organization enabling them to fly through the air, perch on the branches of trees, and walk over the surface of the ground with equal facility, and the muscles of their throats permitting them to utter connected sentences scarcely equalled by the members of any other group of birds.

189. CORVUS CORAX. Vol. III. Pl. LVII.

RAVEN.

A resident species, generally dispersed over the three kingdoms—plentiful in the north, more scarce in the south, where its great size and questionable habits procure it many enemies. Besides Britain, the northern portion of Europe, Asia, and America are countries which may include it in their avifaunas.

190. CORVUS CORONE Vol. III. Pl. LVIII.

CARRION-CROW.

A resident species, generally diffused over the three kingdoms; is also found in most parts of Europe. Jerdon, on the authority of

Dr. Adams, assigns it a place in the fauna of India, and Swinhoe in that of China; while it frequents at least the northern portion of Africa.

191. *CORVUS CORNIX* Vol. III. Pl. LIX.

HOODED CROW.

A resident species in the three kingdoms; breeds in Scotland and Ireland, and but very rarely in England; is to be met with in many parts of the European continent, both north and south; and is particularly common in Palestine and Egypt, where it is often the foster-parent of the young of the Great Spotted Cuckoo (*Oxylophus glandarius*).

192. *CORVUS FRUGILEGUS* Vol. III. Pl. LX.

ROOK.

I have retained this bird in the genus *Corvus*; many other authors have adopted Lesson's genus *Frugilegus*, and Prof. Kaup's term of *Tryphanocorax* for it and its immediate allies. Unlike the Crows the Rooks are gregarious and associate in immense flocks; they differ from them also in the structure of their bills, the peculiar form of which seems adapted for some special purpose, perhaps for the procurement of a particular kind of food, such as large underground-deposited larvæ of insects, grain, and tuberous roots, as the husbandman well knows to his cost. The rook is even still more omnivorous; for it will not refuse worms, crustaceans, or carrion thrown up by the waves of the sea. Generally dispersed over England, Scotland, and Ireland. Rooks are only found in a limited portion of the Old World.

193. *CORVUS MONEDULA* Vol. III. Pl. LXI.

JACKDAW.

Even this indigenous species and its several near allies have been subjected to a generic separation from the genus *Corvus*, the term *Lycos* having been bestowed upon it by Boie, the specific names of the others being *collaris* for the Macedonian bird, *dauricus* for the Daurian and Chinese species, *neglectus* for that inhabiting Japan. All are of small size when compared with the true Crows; they affect different situations for the purpose of breeding, resorting to rocks, old towers, and holes in the ground rather than to the trees. They are strictly denizens of the Old World.

Genus *FREGILUS*.

The Red-legged Crows differ considerably from any of the species above noticed, and are certainly entitled to a separate generic appellation, and accordingly have received three or four. The genus comprises but few species, only two being recognized, namely the

bird inhabiting Europe, *F. graculus*, and the *F. himalayensis* of the Himalayas.

194. *FREGILUS GRACULUS* Vol. III. Pl. LXII.

CHOUGH.

This truly indigenous species is spread over the three kingdoms, but is more rare in Scotland; breeds in the rocks on the sea-shore, in company with Cormorants, Gulls, Puffins, and Guillemots. Found also in many of the hilly and Alpine parts of the European continent and in North Africa.

Genus *PICA*.

A very elegant group of birds, whether seen among the branches of trees or on the ground. Their powers of flight are not so great as those of the preceding members of the family. All are similarly coloured, black, white, and green with bronzy reflections being the prevailing tints. Two species inhabit the northern portions of America; one is peculiar to Africa; the remainder frequent Europe, Asia, and Japan,—each being confined to its own limited area, beyond which it is seldom found.

195. *PICA CAUDATA* Vol. III. Pl. LXIII.

MAGPIE.

An ornamental and stationary species, inhabiting most of the counties of England, Scotland, and Ireland.

Genus *GARRULUS*.

If we restrict this genus to the birds of the Old-World form, of which our familiar Jay is a typical example, it will be found to consist of nine or ten species, and, as is the case with the Magpies, that Europe and Asia are their head quarters; at the same time North Africa is not destitute of its own peculiar Jay. Structurally they are especially adapted for frequenting the branches of trees, and not for the ground, although they are often seen there. They are a sly, crafty race; and much obloquy attaches to them for their habit of pilfering the eggs and the young of other birds; fruits and berries, insects, snails, worms, and other of the lower animals afforded by forests constitute, however, their chief food.

196. *GARRULUS GLANDARIUS* Vol. III. Pl. LXIV.

JAY.

A resident species, more common in England than in Scotland. Thompson says it is only indigenous in the southern parts of Ireland. Mr. J. H. Gurney considers that an autumnal migration takes place to our eastern coasts. On the continent of Europe the Jay is

generally dispersed wherever the country is suited to its habits. I have a specimen killed in Spain which does not differ from examples obtained in this country.

Genus NUCIFRAGA.

Only three or four species of Nutcracker have yet been characterized. They are inhabitants of Europe and Asia.

197. NUCIFRAGA CARYOCATACTES Vol. III. Pl. LXV.
NUTCRACKER.

198. NUCIFRAGA CARYOCATACTES Vol. III. Pl. LXVI.
NUTCRACKER (young).

Indigenous in most of the mountainous and woody countries of Europe; breeds abundantly in Switzerland. In England it can only be considered an accidental visitor. Mr. Harting, in his 'Handbook of British Birds,' enumerates about twenty instances of its occurrence here from the date Pennant wrote, 1753, to within a few years of the present time, 1872; still these visits can only be regarded as accidental.

Family CUCULIDÆ.

The members of this great family of birds are rendered especially remarkable and interesting from the circumstance of the greater number of them having parasitic habits. The entire family comprises about two hundred species, which are subdivided into several subfamilies, and many genera. They are universally dispersed over the temperate portions of the globe; but not more than a fourth part of the whole number are found in America.

Genus CUCULUS.

The members of this genus, restricted to the true Cuckoos, are tolerably numerous. One species inhabits Europe; and there are others in India, China, Java, Sumatra, the islands of the Indian archipelago, and Australia; they are also well represented in Africa.

199. CUCULUS CANORUS Vol. III. Pl. LXVII.
COMMON CUCKOO.

200. CUCULUS CANORUS Vol. III. Pl. LXVIII.
COMMON CUCKOO (young).

The common Cuckoo is a true migrant, coming to us from the south in May, and departing again in September, the young being frequently left behind to a later period of the year.

I now find that the opinion ventured in my account of this species as to the impossibility of the young Cuckoo ejecting the young of its foster-parents at the early age of three or four days is erroneous; for a lady of undoubted veracity and considerable ability as an observer of nature and as an artist, has actually seen the act performed, and has illustrated her statement of the fact by a sketch taken at the time, a tracing of which has been kindly sent to me by the Duke of Argyll, and I have considered it of sufficient interest to reproduce here in a woodcut. The sketch was accompanied by Mrs. Blackburn's account of the circumstance as it came under her observation—which is here given from No. 124 of 'Nature,' a weekly illustrated journal of science.

"Several well-known naturalists who have seen my sketch from life of the young Cuckoo ejecting the young Pipit (opposite p. 22 of the little versified tale of mine)* have expressed a wish that the details of my observations of the scene should be published. I therefore send you the facts, though the sketch itself seems to me to be the only important addition I have made to the admirably accurate description given by Dr. Jenner in his letter to John Hunter, which is printed in the 'Philosophical Transactions' for 1788 (vol. lxxviii. pp. 225, 226), and which I have read with pleasure since putting down my own notes.

"The nest (which we watched last June, after finding the Cuckoo's egg in it) was that of the common Meadow-Pipit (Titlark, Moss-cheeper), and had two Pipit's eggs besides that of the Cuckoo. It was below a heather bush, on the declivity of a low abrupt bank on a Highland hill-side in Moidart.

"At one visit the Pipits were found to be hatched, but not the Cuckoo. At the next visit, which was after an interval of forty-eight hours, we found the young Cuckoo alone in the nest, and both the young Pipits lying down the bank, about ten inches from the margin of the nest, but quite lively after being warmed in the hand. They were replaced in the nest beside of the Cuckoo, which struggled about till it got its back under one of them, when it climbed backwards directly up the open side of the nest, and hitched the Pipit from its back on to the edge. It then stood quite upright on its legs, which were straddled wide apart, with the claws firmly fixed halfway down the inside of the nest, among the interlacing fibres of which the nest was woven; and, stretching its wings apart and backwards, it elbowed the Pipit fairly over the margin so far that its struggles took it down the bank instead of back into the nest.

"After this the Cuckoo stood a minute or two, feeling back with its wings, as if to make sure that the Pipit was fairly overboard, and then subsided into the bottom of the nest.

"As it was getting late, and the Cuckoo did not immediately set to work on the other nestling, I replaced the ejected one, and went

* 'The Pipits,' illustrated by Mrs. Hugh Blackburn. Glasgow: Maclehose, 1872.

home. On returning next day, both nestlings were found dead and cold, out of the nest. I replaced one of them ; but the Cuckoo made no effort to get under and eject it, but settled itself contentedly on the top of it. All this I find accords accurately with Jenner's description of what he saw. But what struck me most was this : The Cuckoo was perfectly naked, without a vestige of a feather, or



even a hint of future feathers ; its eyes were not yet opened, and its neck seemed too weak to support the weight of its head. The Pipits had well-developed quills on the wings and back, and had bright eyes, partially open ; yet they seemed quite helpless under the manipulations of the Cuckoo, which looked a much less developed creature, the Cuckoo's legs, however, seemed very muscular, and it appeared to feel about with its wings, which were absolutely featherless, as with hands, the 'spurious wing' (unusually large in proportion) looking like a spread-out thumb. The most singular thing of all was the direct purpose with which the blind little monster made for the open side of the nest, the only part where it could throw its burthen down the bank. I think all the spectators felt the sort of horror and awe at the apparent inadequacy of the creature's intelligence to its acts that one might have felt at seeing a toothless hag raise a ghost by an incantation. It was horribly 'uncanny' and 'growsome.'

A few words more on this subject. My friend Mr. Noble, of Park Place, Henley-on-Thames, wrote to me thus on the 4th of May, 1871 :—

“Mrs. Noble told me this morning that a Wagtail had built a nest in our dining-room balcony; on going thither I found the nest in a corner quite exposed, with three eggs in it, one much larger than the others; the two smaller ones were of a greenish colour with minute spots, the larger of a deeper green and more largely blotched. Can this be a Cuckoo’s?”

On Sunday, May the 21st, I saw this nest with four young birds, three lying by the side of the nest, from which they had evidently been but recently thrown, as they were plump and fresh. Allowing, therefore, that the Wagtail had laid a third egg on the 5th of May, and thirteen or fourteen days for the hatching of these birds, they must have been ejected in about three days after exclusion. On the 31st of the same month Mr. Noble again wrote:—“The Cuckoo is nearly fledged; he rises in the nest in the most hideous way, extending his neck like a serpent.”

Were we in possession of similar positive evidence of the means by which the Cuckoo’s egg is deposited in the dome-shaped nest of the Wren, and in those of other birds, as we now have of those in which the young of the foster-parents are ejected, the history of the breeding-habits of this remarkable bird would be complete.

Genus OXYLOPHUS.

There are several species of this genus, which inhabit Africa, India, and some of the islands to the southward. They are, I believe, all parasitic, laying their eggs in the nests of Crows, Magpies, and other large birds.

201. OXYLOPHUS GLANDARIUS Vol. III. Pl. LXIX.

GREAT SPOTTED CUCKOO.

Two individuals of this species having been killed in our islands, one in Ireland and another in Northumberland, it becomes necessary to figure it in the present work. Respecting this latter example, I received the following note from Lord Ravensworth, Dec. 5, 1871:—

“You will no doubt be interested to hear that a specimen of the Great Spotted Cuckoo was shot last summer, in July or August, upon the moors at Hesleyside, the noted seat of W. H. Charlton, Esq., on the banks of the North Tyne. It has been preserved, but unluckily is indifferently set up.” The Rev. H. B. Tristram informs me that he handled this bird in the flesh before it had been skinned.

In Southern Europe this bird is plentiful during summer, and in North Africa it is to be seen at all times. Even the rapacious Hooded Crow does not disdain to become the foster-parent of the young of this species.

Genus Coccyzus.

Composed of a limited number of species, all American, of which two have been killed in our islands.

202. *COCYZUS AMERICANUS*.

Yellow-billed Cuckoo.

Five instances of the occurrence of this species with us have been recorded by Mr. Harting in his 'Handbook of British Birds'—two in Ireland, two in Wales, and one in Cornwall. A figure will be found in Yarrell's 'History of British Birds,' vol. ii. p. 210.

203. *COCYZUS ERYTHROPHthalmus*.

Black-billed Cuckoo.

One killed in the county Antrim, Sept. 25, 1871, see 'Zoologist,' 1872, p. 3022.

I have not considered it necessary to figure these two American species, as they certainly do not belong to our fauna.

Family PICIDÆ.

With the exception of Australia, New Zealand, and Polynesia, Woodpeckers are distributed over the temperate and warmer regions of every country both of the Old and the New World. About 300 species are enumerated in the useful 'Hand-list of Birds' of the late Mr. G. R. Gray, of the British Museum. As might naturally be supposed, much diversity of form exists among the members of so vast a body of birds, each form being especially adapted to some given purpose or locality, the boles and leafy foliage of trees, rocky parched plains and humid grassy meadows being alike resorted to by one or other of them. They are all zygodactyle in the form of their feet, although, in some cases, only a rudiment of one of the hind toes is found to exist. So far as my knowledge extends, they one and all deposit their beautiful shining white eggs in the boles of trees; but I think it probable that some few may occasionally place theirs in crevices of rocks. Their principal food consists of insects and their larvæ; the ground-frequenting species consume ants and their eggs in great numbers; and fruits and berries are not rejected by others. The species inhabiting Europe are about ten in number, four of which are represented in the present work; and I here subjoin notices of the occurrence of two or three other accidental visitors from America.

Subfamily PICINÆ.

Genus *Picus*.

Members of this truly arboreal form are found both in the Old and in the New World. They feed almost exclusively on insects and their larvæ, but probably partake of spiders also, which they search for and extract from the bark of trees.

204. *PICUS MAJOR* Vol. III. Pl. LXX.
GREAT SPOTTED WOODPECKER.

A resident species. Common in England, but more rarely met with in Scotland and Ireland.

205. *PICUS LEUCONOTUS* Vol. III. Pl. LXXI.
WHITE-BACKED WOODPECKER.

An accidental visitor to the Hebrides.

206. *PICUS MINOR* Vol. III. Pl. LXXII.
LESSER SPOTTED WOODPECKER.

A resident species in England, extremely rare, if at all to be found, in Scotland, and never occurs in Ireland.

The late Mr. Briggs, of Cookham, in Berkshire, who was a close observer of nature, and especially of our native birds, informed me just prior to his death that he had witnessed many curious actions and displays performed by this species while flitting and hovering with outspread wings around the leafy branches and crowns of high trees, apparently engaged in capturing small insects. I deem it necessary to mention this, because we really know but little respecting the actions of even our commonest Woodpecker.

207. *PICUS VILLOSUS*.

Hairy Woodpecker.

There is no doubt about this American species having been killed several times in Britain. Latham mentions a pair from Halifax, in Yorkshire, in the collection of the then Duchess of Portland; and one was killed in 1849 at Whitby, in Yorkshire, as stated by Mr. Higgins in the 'Zoologist' for that year, p. 2496. This latter specimen I have examined, and have no doubt of its identity, nor of the authenticity of its occurrence. It is not figured, because it is purely American and only an accidental visitor.

208. *PICUS PUBESCENS*.

Downy Woodpecker.

Mr. Harting mentions the occurrence of a single example of this bird at Bloxworth, near Blandford, Dorsetshire, in December 1836, as reported by the Rev. O. P. Cambridge in the 'Zoologist' for 1859, p. 6444.

Owing to this species being a native of the New World, and its having been only once seen in England, I have not given a figure of it.

Genus *DRYOCOPUS*.

As restricted, this genus contains but a single species.

209. *DRYOCOPUS MARTIUS*. Vol. III. Pl. LXXIII.

GREAT BLACK WOODPECKER.

This bird is of large size ; and the prevailing tint of its plumage is sooty black, relieved by red on the crown. Its native localities are the pine-woods of Norway, Sweden, and Switzerland. Many instances of its having been killed in Britain are recorded ; but it is probable that not one of them is authentic. At all events there is not a certified British-killed specimen in any of our Museums or private collections ; consequently it is a very doubtful visitor. For further information respecting it I refer my readers to the letterpress accompanying the Plate.

Subfamily GECININÆ.

Genus GECINUS.

The members of this genus (known as Green Woodpeckers) being less arboreal than the true *Pici*, spend much of their time on the ground. In Britain the trimly kept lawns and meadows are favourite places of resort. Their food mainly consists of ants and their larvæ. Besides *G. viridis* three more species inhabit Europe ; and others are to be found in Asia and Africa.

210. *GECINUS VIRIDIS* Vol. III. Pl. LXXIV.

GREEN WOODPECKER, or YAFFLE.

A resident species in England, in many parts of which it is known by the name of "Yaffle." It is rare in Scotland, and has not yet been seen in the sister kingdom of Ireland.

211. *GECINUS VIRIDIS* Vol. III. Pl. LXXV.

GREEN WOODPECKER, or YAFFLE (young).

Subfamily COLAPTINÆ.

Genus COLAPTES.

A purely American form, comprising about six or seven species, ranging from the United States to Bolivia.

212. *COLAPTES AURATUS*.

Golden-winged Woodpecker.

A native of the eastern parts of North America, a single example of which was killed in Amesbury Park, Wiltshire, in the autumn of 1836, as recorded by Mr. George S. Marsh, of Chippenham, in the 'Zoologist' for 1859, p. 6327, where he says, "My brother saw this bird in the flesh, just after it was shot. It was preserved by Mr. Edwards, of Amesbury, and has never been out of my possession."

Subfamily YUNGINÆ.

Genus YUNX.

Only three or four species are known of this very anomalous Old-World form. Their range extends over a great portion of the northern regions of Asia, entering Japan, and one species Eastern and Southern Africa.

213. YUNX TORQUILLA Vol. III. Pl. LXXVI.

WRYNECK.

A true harbinger of spring, arrives before the Swallow, serenades us with its peculiar cry of *Pee-pee-pae*, and but seldom exposes its body to view. Is generally distributed over England and the southern portion of Scotland. Our Irish ornithologists must regret that it does not visit their country; for a more curious creature does not exist. Many of its actions, and the character of its markings, have procured for it the trivial name of "Snakebird."

ORDER **RASORES.**Family **COLUMBÆ.**

The members of the Columbæ, or Pigeons, may be said to be more universally dispersed than any other family of birds; for there is no portion of the globe, favoured with a temperate or warm climate, where representatives of one or more of the various genera of which it is composed do not exist. In round numbers, between three and four hundred species are now known; of these, four are inhabitants of Britain, one of which is a summer migrant.

Genus **PALUMBUS.**

214. **PALUMBUS TORQUATUS** Vol. IV. Pl. I.
WOOD-PIGEON or CUSHAT.

A stationary species, universally dispersed over Britain and most parts of Europe and North Africa.

Genus **COLUMBA.**

A form the members of which are chiefly confined to the Old World.

215. **COLUMBA GENAS** Vol. IV. Pl. II.
STOCK DOVE.

Partially migratory, but breeds with us.

216. **COLUMBA LIVIA** Vol. IV. Pl. III.
ROCK-PIGEON.

Common and stationary in all the rocky portions of Britain, the supposed origin of our domestic Pigeon.

Genus **TURTUR.**

This genus is represented by the well-known Turtledove, that visits Britain in spring, to which several eastern species might be added.

217. **TURTUR AURITUS** Vol. IV. Pl. IV.
TURTLE DOVE.

A true summer resident in all the southern and midland portions of Britain.

Genus ECTOPISTES.

218. ECTOPISTES MIGRATORIUS.

Migratory Pigeon.

A native of North America: three or four instances of its occurrence in England and Scotland are on record. Not figured.

Family TETRAONIDÆ.

The Grouse (the trivial name for the members of this family) are among the most important of edible birds. They exist in very circumscribed limits, namely the northern portions of the Old and New Worlds. Those which frequent Britain are the magnificent Capercaillie, the Blackcock, the Red Grouse, and the Ptarmigan. Neither the Capercaillie nor the Blackcock is found in America; but that country is inhabited by species equally fine which are not found elsewhere.

Genus TETRAO.

219. TETRAO UROGALLUS Vol. IV. Pl. V.

CAPERCAILLIE OR COCK OF THE WOOD.

Breeds in Scotland in abundance.

220. TETRAO TETRIX Vol. IV. Pl. VI.

BLACKCOCK.

A stationary and breeding species in the three kingdoms.

Genus LAGOPUS.

The well-known Red Grouse of England, Wales, Scotland, and Ireland may be regarded as the type of the present genus.

221. LAGOPUS SCOTICUS Vol. IV. Pl. VII.

RED GROUSE.

Inhabits England, Scotland, and Ireland, but not south of Wales.

222. LAGOPUS MUTUS Vol. IV. Pl. VIII.

PTARMIGAN.

Stationary.

223. LAGOPUS MUTUS Vol. IV. Pl. IX.

PTARMIGAN (summer plumage).

224. *LAGOPUS MUTUS* Vol. IV. Pl. X.
PTARMIGAN (autumn plumage).

I have considered it desirable to give three plates, illustrating three very distinct states of plumage, of this very variable bird.

Genus *SYRRHAPTES*.

An Old-World genus of Sand-Grouse, comprising two species, the native haunts of which are the Steppes of Russia, China, and Thibet. A large number of individuals of the *S. paradoxus* made an extraordinary visit to various parts of the European continent and Britain in the years 1859 and 1860.

225. *SYRRHAPTES PARADOXUS* Vol. IV. Pl. XI.
PALLAS'S SAND-GROUSE.

For particulars see the text of the Plate referred to.

Family PHASIANIDÆ.

Genus *PHASIANUS*.

A genus of six or eight species, all of which are natives of the northern regions of the Old World, from Asia Minor to Japan. Although India, particularly its hilly portions, abounds in gallinaceous birds, no true Pheasant is found there.

226. *PHASIANUS COLCHICUS* Vol. IV. Pl. XII.
COMMON PHEASANT.

A former introduction, probably from Turkey or some part of the neighbourhood of the Black Sea.

Family PERDICIDÆ.

In this division of the Gallinacæ is comprised a great number of varied forms, most of which are natives of the northern portions of the Old World. In England we have two which may be considered indigenous, the Grey- and the Red-legged Partridge; the migratory Quail also frequently spends the summer in these kingdoms.

Genus *PERDIX*.

A genus of three species, namely:—*P. cinerea*, habitat Europe; *P. barbatus*, habitat China; and *P. Hodgsoniae*, habitat Thibet.

227. *PERDIX CINEREA* Vol. IV. Pl. XIII.

PARTRIDGE.

A stationary species.

Genus *CACCABIS*.

A genus instituted for the Red-legs, which differ conspicuously by their finer plumage and the presence of spurs on their tarsi.

228. *CACCABIS RUBRA* Vol. IV. Pl. XIV.

RED-LEGGED PARTRIDGE.

A stationary species.

229. *CACCABIS PETROSA*.

It is stated that wild specimens of this bird have been killed in England; but as this is questionable I do not figure it.

Genus *COTURNIX*.

A form comprised of a limited number of species, which range generally over the Old World—Europe, India, China, the southernmost parts of Africa, Australia, and New Zealand.

230. *COTURNIX COMMUNIS* Vol. IV. Pl. XV.

COMMON QUAIL.

A summer but uncertain migrant to England, while in Ireland it appears to be stationary; at least Quails are frequently seen there in winter.

Family *TURNICIDÆ*.

The Turnices (or Hemipodes, as they are frequently called) constitute a distinct group among the Gallinacæ. About fifteen species are known, all of which inhabit the sandy portions of the Old World, but are most abundant in Australia. The European fauna comprises but one, individuals of which have now and then wandered to Britain, probably from Spain.

231. *TURNIX AFRICANA* Vol. IV. Pl. XVI.

ANDALUSIAN TURNIX.

An accidental visitor.

Family *OTIDIDÆ*.

The Bustards, from their large size and noble bearing, constitute one of the most remarkable groups in ornithology. They are all in-

habitants of the sandy plains of the Old World; and many of the most conspicuous species are natives of Africa.

Genus OTIS.

Formerly Great Britain enumerated a fine bird of this genus; now and then, however, a solitary individual flies over to us from Spain or France, where it is still tolerably plentiful.

232. OTIS TARDA Vol. IV. Pl. XVII.

GREAT BUSTARD.

Accidental visitant.

233. OTIS TETRAX Vol. IV. Pl. XVIII.

LITTLE BUSTARD.

Accidental visitant.

234. OTIS MACQUEENII.

Macqueen's Bustard.

Quite accidental.

A native of Afghanistan and the neighbouring countries. A specimen of this bird, now in the possession of the Philosophical Society of York, was killed at Kirton Lindsey, in Lincolnshire, on the 7th of October, 1847. Still, with so slight a claim to be considered British, I shall content myself with this notice of it and a reference to a figure which will be found in my 'Birds of Asia.' Specimens have also been met with in Holland and Denmark.

ORDER GRALLATORES.

Family GRUIDÆ.

As must have been noticed by every one who has given a moment's thought to the subject, the Gruidæ, or Cranes, differ from the Herons and every other group of birds of which this great order is composed. The larger number of the known species are inhabitants of the Old World, over which they are widely spread, the plains of Australia on the one hand and those of Hindustan on the other being frequented by one or more species; the form also occurs in Africa, from north to south. In the New World, the northern portions only are tenanted by Cranes; one species inhabits, or rather did inhabit, the British Islands.

235. GRUS CINEREA Vol. IV. Pl. XIX.

COMMON CRANE.

An accidental visitant.

236. *GRUS VIRGO*.

Demoiselle Crane.

A native of Southern Europe, Northern Africa, and India, has been seen and one shot in Orkney, in May 1863 (Saxby, 'Zoologist,' p. 8692). Not figured.

237. *GRUS PAVONINUS*.

Balearic Crane.

This bird has also been captured within the limits of Britain, and by some included in our lists of species—wrongly, however, as I think, since its true home is north-western Africa, and its occurrence here must have been quite accidental.

Family ARDEIDÆ.

If the Bitterns are included among the members of this universally dispersed family, then the species amount to nearly a hundred in number. Unlike the Cranes, they are generally sedentary in their habits and affect watery situations. In the British avifauna there are ten species.

Genus ARDEA.

238. *ARDEA CINEREA* Vol. IV. Pl. XX.

HERON.

Resident and very generally dispersed.

239. *ARDEA PURPUREA* Vol. IV. Pl. XXI.

PURPLE HERON.

This fine bird, which is abundant in Holland and France, can only be considered an accidental visitor to Britain.

Genus HERODIAS.

240. *HERODIAS ALBA* Vol. IV. Pl. XXII.

GREAT WHITE EGRET, or WHITE HERON.

Quite an accidental visitant, arriving at very uncertain periods.

241. *HERODIAS GARZETTA* Vol. IV. Pl. XXIII.

LITTLE EGRET.

This, like the last, is merely a straggler to Britain.

Genus BUBULCUS.

242. *BUBULCUS RUSSATUS* Vol. IV. Pl. XXIV.

BUFF-BACKED HERON.

An accidental visitor.

Genus BUPHUS.

243. BUPHUS COMATUS Vol. IV. Pl. XXV.
SQUACCO HERON.

The visits of this bird are very infrequent, and its appearance not to be depended upon.

Genus NYCTICORAX.

244. NYCTICORAX GRISEUS Vol. IV. Pl. XXVI.
NIGHT-HERON.

This bird must be considered among our accidental visitors.

Genus BOTAURUS.

245. BOTAURUS STELLARIS Vol. IV. Pl. XXVII.
BITTERN.

Formerly a common stationary form in our marshes and fens; now seldom seen, and mostly in winter.

246. BOTAURUS LENTIGINOSUS Vol. IV. Pl. XXVIII.
AMERICAN BITTERN.

The frequent occurrence of this bird in the British Islands demands a place for it in our avifauna; and hence I have given a figure of it.

Genus ARDETTA.

247. ARDETTA MINUTA Vol. IV. Pl. XXIX.
LITTLE BITTERN.

Although never to be found with certainty, it is probable that we are seldom without the presence of this interesting marsh-lover; it cannot, however, be considered other than a chance visitor.

Family CICONIIDÆ.

This family includes among its members not only our well-known White and Black Storks, but at least twenty other species of those useful birds. Whatever the condition of Britain may formerly have been, it is no longer suited as a resting-place for either of the two species just mentioned; still scarcely a year passes without one or other of them accidentally dropping down on our marshes during their wanderings from one country to another.

248. *CICONIA ALBA* Vol. IV. Pl. XXX.

WHITE STORK.

A chance visitor.

249. *CICONIA NIGRA* Vol. IV. Pl. XXXI.

BLACK STORK.

An accidental visitor.

Family PLATALEIDÆ.

The seven or eight known species of Spoonbills have been separated into a distinct family by Bonaparte. They are found both in the Old and the New World. Although so limited in species they are numerous in individuals, and are very widely dispersed over the surface of the globe.

250. *PLATALEA LEUCORODIA* Vol. IV. Pl. XXXII.

SPOONBILL.

An accidental visitor from the Continent.

Family CHARADRIIDÆ.

Mr. Harting, in his 'Handbook,' has placed *Ædicnemus*, *Squatarola*, *Vanellus*, *Eudromias*, *Ægialitis*, *Strepsilas*, and *Hæmatopus* as a part of this great family of ground-birds; and I shall here follow his arrangement, since no one has paid greater attention to this subject than that gentleman. At the same time I must remark that perhaps no two persons will agree as to the position of *Vanellus*.

Genus VANELLUS.

251. *VANELLUS CRISTATUS* Vol. IV. Pl. XXXIII.

LAPWING, or PEERWIT.

Resident and generally spread over the three kingdoms. About four or five of this genus are known; they inhabit both the Old and the New World.

Genus HIMANTOPUS.

Of this form six or seven species are found in the Old and the New World respectively. They are generally termed Stilts or Stilt-Plovers, and characterized by elegance in all their actions.

252. *HIMANTOPUS CANDIDUS* Vol. IV. Pl. XXXIV.

STILT, or LONG-LEGGED PLOVER.

An accidental visitor to Britain.

Genus *ŒDICNEMUS*.

From four to six species of this form inhabit each side of the Equator in the Old World; two or three are similarly dispersed over America.

253. *ŒDICNEMUS CREPITANS* Vol. IV. Pl. XXXV.

THICK-KNEED BUSTARD.

Common and stationary in Britain.

Genus *SQUATAROLA*.

Our well-known Grey Plover is almost, if not the sole member of this genus.

254. *SQUATAROLA HELVETICA* Vol. IV. Pl. XXXVI.

GREY PLOVER.

A bird remarkable for the seasonal changes to which it is subject. In summer the breast is jet-black, while in winter the same part is striated or pure white. A bird of passage in Britain, proceeding northward in spring and returning southward at the opposite season.

255. *SQUATAROLA HELVETICA* Vol. IV. Pl. XXXVII.

GREY PLOVER (winter plumage, and young).

Genus *CHARADRIUS*.

The well-known Golden Plover of England may be regarded as the type of this genus as now restricted. About five species are known, all characterized by the flavour of their flesh and the great seasonal changes to which they are subject in summer and winter, and which have induced me to give two plates illustrative of them. One or other of the five species inhabit most parts of the entire globe, but are more abundant in the Old than in the New World.

256. *CHARADRIUS PLUVIALIS* Vol. IV. Pl. XXXVIII.

GOLDEN PLOVER (in summer plumage).

A resident species.

257. *CHARADRIUS PLUVIALIS* Vol. IV. Pl. XXXIX.

GOLDEN PLOVER (in winter plumage).

Genus *ÆGIALOPHILUS*.

A genus formed for the Kentish Plover and other allied species.

258. *ÆGIALOPHILUS CANTIANUS* Vol. IV. Pl. XL.

KENTISH PLOVER.

A spring and summer resident, coming here to breed in May. Common on the south coast.

Genus *ÆGIALITIS*.

Of these little Plovers or Ringed Dotterels, as they are more commonly called, numerous species are spread over both the Old and the New World. Two are found in Britain—one of which is stationary, the other an accidental visitor.

259. *ÆGIALITIS HIATICULA*. Vol. IV. Pl. XLI.

RINGED PLOVER.

A resident species, abundant in most parts of the three kingdoms.

260. *ÆGIALITIS MINOR* Vol. IV. Pl. XLII.

LITTLE RINGED PLOVER.

An occasional visitant, the native country of which is Eastern Europe, Africa, and India.

261. *ÆGIALITIS VOCIFERA*.

Kill-deer Plover.

This American bird has been added to the list of our fauna from the circumstance of a specimen having been killed in Hampshire in 1857.

Genus *EUDROMIAS*.

The type and almost the only representative of this genus is the well-known Dotterel, which passes over the British Islands in May.

262. *EUDROMIAS MORINELLUS* Vol. IV. Pl. XLIII.

DOTTEREL.

Spring and autumn migrant; breeds in Westmoreland and the adjoining counties.

Genus *CURSORTIUS*.

A small genus of highly interesting birds which persistently keep to the regions of the Old World, and almost exclusively to Africa and Asia. Swift of foot, they have been called coursers. They are said to trip over the ground with great nimbleness, their movements then presenting no inapt resemblance to pieces of paper blown about by the wind. They naturally inhabit great sandy wastes rather than cultivated and arable lands; and hence the only European species is but seldom seen.

263. CURSORIUS GALLICUS Vol. IV. Pl. XLIV.

CREAM-COLOURED COURSER.

Quite an accidental visitor to the British Islands.

Genus HÆMATOPUS.

Although not very numerous in species, there is scarcely any country on the face of the globe where this form is not represented. In the southern hemisphere, at Cape Horn in America, the Cape of Good Hope in Africa, in the southernmost portion of Tasmania and in New Zealand, a bird of this form is certain to be seen, while in the opposite hemisphere they are nearly as constant. These birds are commonly known by the misnomer of Oyster-catchers.

264. HÆMATOPUS OSTRALEGUS Vol. IV. Pl. XLV.

OYSTER-CATCHER.

A resident species round our coasts.

Genus GLÆREOLA.

An isolated form among the Plovers. The six or seven species known are all confined to the Old World. Their chief food consists of insects, which they capture on the wing, after the manner of the Swallow.

In speaking of an allied species (*G. melanoptera*), Mr J. H. Gurney, in Andersson's 'Birds of Damara Land,' states:—"The principal enemy of these great swarms (of locusts), and the valued friend of the Cape farmer, is the small locust-bird, *Glareola Nordmanni* These birds come, I may say, in millions, attendant on the flying swarms of locusts: indeed the appearance of a few of them is looked upon as a sure presage of the locust swarms being at hand. Their mode of operation, as I saw it, was as follows:—They intercept a portion of the swarm and form themselves into a ring of considerable height, regularly widening towards the top, so as to present the appearance of a revolving balloon or huge spinning-top. They thus fly one over the other, and, hawking at the locusts, gradually contract their circle and speedily demolish the locusts within its limits. As their digestion, like that of all insectivorous birds, is very rapid, the form in which they thus enclose their prey is admirably adapted to enable the lower to escape the droppings of the upper birds. When they have consumed this portion of the swarm, they follow up the main body and commence another attack, and so on, until night sets in and the birds happen to lose the swarm or the locusts are all devoured. I should not forget to mention that the beak of these birds is exactly of such a shape and such dimensions that when they seize the locusts the snap cuts off the four wings, and a passer by sees a continual shower of locusts' wings falling on the ground. At another time, when I was stationed at Fort Peddie, and the country was suffering from the effects of a

long drought, and was overrun with unusual quantities of ants and grasshoppers, we were visited by thousands of these birds, which remained many days devouring these pests. Though the locust-birds are excellent eating, no one ever thinks of destroying them; and they are so fearless that, though I often rode or ran amongst them to test their tameness, only a few in my immediate vicinity would rise, the rest continuing to feed; but every ten minutes or so the whole mass would rise of their own accord and fly, first a few yards to the right and then to the left, in a slanting direction, presenting alternately a black and white wave of birds some miles in length, a sight never to be forgotten by the spectator.

265. *GLAREOLA PRATICOLA*.

COMMON PRATICOLE Vol. IV. Pl. XLVI.

An accidental visitor to the British isles.

Family TANTALIDÆ.

Genus *FALCINELLUS*.

266. *FALCINELLUS IGNEUS* Vol. IV. Pl. XLVII.

GLOSSY IBIS.

This bird has a wide range, being found in Europe, India, Africa, and Australia. Accidental in Britain.

Family SCOLOPACIDÆ.

Under this family name I shall, like Mr. Harting, include many forms of strand- and marsh-loving birds, beginning with the Curlews and ending with the Snipes.

Genus *NUMENIUS*.

The birds of this form will be found described in all general histories of birds under the trivial name of Curlews and Whimbrels. One or other of the species are distributed over every country of the entire globe. In Britain we have two very distinct kinds, to which a third, a straggler from America, has just been added; here, however, it will only receive a passing notice.

267. *NUMENIUS ARQUATA* Vol. IV. Pl. XLVIII.

CURLEW.

Resident and universally dispersed. Lives much on the sea-shore during winter, and in summer resorts to heathery hills and wastes for the purpose of breeding.

268. *NUMENIUS PLEOPUS* Vol. IV. Pl. XLIX.
WHIMBREL.

A spring and autumn visitant, leaving us at the former period for regions further north, whither it proceeds to breed.

269. *NUMENIUS BOREALIS*.
Esquimaux Curlew.

This bird has been shot in this country about four times; being, however, purely an American species, it is not figured.

Genus *LIMOSA*.

Godwits, like Curlews, are all but universally dispersed over the sea-shores and marshes of every country.

270. *LIMOSA MELANURA* Vol. IV. Pl. L.
BLACK-TAILED GODWIT.

Formerly used to breed in our marshes, but now, owing to the progress of cultivation, can only be regarded as a migrant.

271. *LIMOSA RUF A* Vol. IV. Pl. LI.
BAR-TAILED GODWIT.

A regular spring and autumn migrant, going northward to breed, and returning southward in winter.

Genus *RECURVIROSTRA*.

Of this highly interesting genus there are three well-marked species known:—the present, which is common in Europe and Africa; the second, which is found in North America; and the third, a beautiful red-necked bird, is a native of Australia.

272. *RECURVIROSTRA AVOCETTA* Vol. IV. Pl. LII.
AVOCET.

Genus *GLOTTIS*.

273. *GLOTTIS CANESCENS* Vol. IV. Pl. LIII.
GREENSHANK.

A spring and autumn migrant, breeding in Scotland, where of late years many nests have been discovered.

Genus *TOTANUS*.

274. *TOTANUS CALIDRIS* Vol. IV. Pl. LIV.
REDSHANK.

Formerly a common resident species in our fens, and breeding

regularly in many parts of England. Drainage and cultivation of waste lands, however, have almost driven it from our shores, except at the periods of its migration in spring and autumn.

275. *TOTANUS FUSCUS* Vol. IV. Pl. LV.

SPOTTED REDSHANK.

In England and Scotland this bird is generally regarded as a spring and autumn migrant; and no instance of its nesting with us has yet been recorded, notwithstanding that individuals of this species frequently remain here long enough in the spring to acquire their full summer plumage. In Ireland it is said to be very rare.

276. *TOTANUS OCHROPUS* Vol. IV. Pl. LVI.

GREEN SANDPIPER.

Although strictly speaking this Sandpiper is only a spring and autumn migrant, examples are now and then obtained in winter, and it has even been reported to have nested in this country. This is by no means unlikely; but its remarkable habit of depositing its eggs in the old nests of other birds at a considerable height from the ground, has no doubt caused it to be overlooked.

277. *TOTANUS GLAREOLA* Vol. IV. Pl. LVII.

WOOD-SANDPIPER.

Like the last-named this species is most frequently observed at the vernal and autumnal periods of migration; but two or three instances of its nesting in Norfolk, Northumberland, and Elginshire have been placed on record.

Genus *ACTITIS*.

278. *ACTITIS HYPOLEUCOS* Vol. IV. Pl. LVIII.

SUMMER-SNIPE.

This well-known and graceful little Sandpiper, like others of the family, is a bird of double passage, and appears with great regularity every spring and autumn. Unlike other species, however, it does not always quit this country to find a nesting-place, but breeds regularly in the north of England, Wales, and Scotland, and less frequently in some parts of the south of England.

279. *ACTITIS MACULARIA* Vol. IV. Pl. LIX.

SPOTTED SANDPIPER.

An inhabitant of the northern continent of America, this bird can only be regarded as a rare straggler to Europe and the British Islands, where it is reported to have been met with several times.

Genus STREPSILAS.

280. STREPSILAS INTERPRES Vol. IV. Pl. LX.

TURNSTONE.

Although a regular migrant to our shores, a few remain with us throughout the winter, and there is good ground for believing some breed within the British Islands. See Harting, 'Handbook of British Birds,' p. 44; Gray, 'Birds of West of Scotland;' and Thompson, 'Birds of Ireland,' vol. ii. p. 120.

Genus MACHETES.

281. MACHETES PUGNAX Vol. IV. Pl. LXI.

RUFF and REEVE

This bird formerly nested regularly in the fens; but, owing to the gradual drainage of their haunts, and undue persecution in the spring, very few now breed here, and that only in favoured localities. It is still, however, a regular spring and autumn migrant.

282. MACHETES PUGNAX Vol. IV. Pl. LXII.

RUFF and REEVE (first autumn plumage).

Genus ACTITURUS.

283. ACTITURUS BARTRAMIUS Vol. IV. Pl. LXIII.

BARTRAM'S SANDPIPER.

A rare straggler from the New World, which has been met with in England in three or four instances at rare intervals.

Genus TRYNGITES.

284. TRYNGITES RUFESCENS Vol. IV. Pl. LXIV.

BUFF-BREADED SANDPIPER.

This is another wanderer from the American continent. It has been noticed, however, more frequently in this country than the last-named: Mr. Harting, in his 'Handbook of British Birds,' p. 138, has given fifteen instances of its capture here.

Genus TRINGA.

285. TRINGA CANUTUS Vol. IV. Pl. LXV.

KNOT.

Although a few of these birds may be found here throughout the winter, it is strictly speaking a spring and autumn migrant.

Genus CALIDRIS.

286. CALIDRIS ARENARIA Vol. IV. Pl. LXVI.
SANDERLING.

The same remark applies to this as to the last-named.

Genus LIMNOCINCLUS.

287. LIMNOCINCLUS PECTORALIS Vol. IV. Pl. LXVII.
PECTORAL SANDPIPER.

Like Bartram's Sandpiper and the Buff-breasted Sandpiper, this bird, which is common to both continents of America, occasionally finds its way across the broad Atlantic, and a temporary home in this country. According to Mr. Harting ('Handbook,' p. 140), some sixteen instances of its occurrence are on record.

Genus ANCYLOCHEILUS.

288. ANCYLOCHEILUS SUBARQUATA Vol. IV. Pl. LXVIII.
CURLEW SANDPIPER.

Like many others of the Sandpipers, this bird is a regular spring and autumn migrant. The discovery of a nest in a tract of sedgy bog round the Loch of Spynie, near Elgin, on the 8th of June, 1853, has been recorded by Mr. R. Gray in his 'Birds of the West of Scotland.'

Genus PELIDNA.

289. PELIDNA CINCLUS Vol. IV. Pl. LXIX.
DUNLIN (summer plumage).

Although a resident species, the Dunlin is nevertheless migratory in spring and autumn. It breeds regularly in Scotland, the Hebrides, and Shetland; and the nest has also been found on the moors of Northumberland and Cornwall.

290. PELIDNA CINCLUS Vol. IV. Pl. LXX.
DUNLIN (winter plumage).

291. PELIDNA BONAPARTEI Vol. IV. Pl. LXXI.
BONAPARTE'S SANDPIPER.

This American species, of which some eight or nine examples have now been procured in this country, is probably more familiar to English readers by the name of Schinz's Sandpiper. It is now generally admitted, however, that the so-called *Tringa* or *Pelidna Schinzi* is merely a small variety or race of the Dunlin; and the appellation should therefore cease to be employed for the present species.

Genus ACTODROMAS.

292. ACTODROMAS MINUTA Vol. IV. Pl. LXXII.

LITTLE STINT.

This graceful little bird is a regular migrant, passing through this country in spring and autumn. It is always more numerous at the latter season, which seems to indicate that the species on going northward in the spring travels by another route than that which it traverses on its return in autumn.

293. ACTODROMAS PUSILLA.

American Little Stint.

An American Little Stint (*A. pusilla*, Wilson) has twice been met with in England. In October 1853 a specimen was shot on Marazion Marsh, Cornwall; and in September 1869 a second was obtained on Northam Burrows, Devon.

This purely American bird has not been figured.

Genus LEIMONITES.

294. LEIMONITES TEMMINCKII Vol. IV. Pl. LXXIII.

TEMMINCK'S STINT.

This little Sandpiper, although of rarer occurrence than the last named, visits this country nevertheless regularly in spring and autumn. It appears, however, to be almost confined to England; for it has been met with only once in Scotland, and once in Ireland.

Genus ARQUATELLA.

295. ARQUATELLA MARITIMA Vol. IV. Pl. LXXIV.

PURPLE SANDPIPER.

Throughout the greater part of the British Islands this bird is chiefly known as a winter visitant; and although it has been observed late in spring in the Hebrides, and presumably breeding there, no one has yet been fortunate enough to discover a nest there.

Genus LIMICOLA.

296. LIMICOLA PYGMÆA Vol. IV. Pl. LXXV.

BROAD-BILLED SANDPIPER.

An inhabitant of Northern Europe and Asia; this little bird moves southward at the approach of winter, and in four or five instances has strayed far enough towards the west to touch the English shore.

In every instance in which specimens have been obtained here, save one, the locality was the coast of Norfolk. The exceptional capture was made in Belfast Bay many years ago.

Genus MACROHAMPHUS.

297. MACROHAMPHUS GRISEUS Vol. IV. Pl. LXXVI.

RED-BREASTED OR BROWN SNIPE.

In Mr. Harting's 'Handbook of British Birds' (p. 144) no less than fifteen instances are given of the occurrence of this North-American species in England and Scotland. In every case, so far as can be ascertained, the specimens were procured in autumn, indicating that their presence here is in some way dependent upon a divergence from the route of their migration southward.

Under the terms *Scolopax*, *Gallinago*, and *Limnocyptes* those members of the true Snipes which do not visit Britain have been figured. They form part of a group of universal distribution.

Genus SCOLOPAX.

298. SCOLOPAX RUSTICOLA Vol. IV. Pl. LXXVII.

WOODCOCK.

This well-known species of late years has become so much more numerous here as a resident, that although numbers still migrate to this country in the autumn, it is difficult to say whether "the first cock of the season" is an early arrival or a home-bred bird.

Genus GALLINAGO.

299. GALLINAGO MAJOR Vol. IV. Pl. LXXVIII.

GREAT SNIPE.

Although this species does not, like the next, breed in this country, it visits us regularly every autumn, but always earlier than does the Common Snipe; and its occurrence during the spring months is rare.

300. GALLINAGO SCOLOPACINA Vol. IV. Pl. LXXIX.

COMMON SNIPE.

A regular winter visitant; but in favourable localities many annually remain to nest and rear their young.

With regard to the so-called Sabine's Snipe, it is now generally regarded as a melanism of the common species, but is of sufficiently rare occurrence to attract notice. In the 'Field' of Dec. 10, 1870, appeared a list to that date of all the known examples which had been obtained, since which time two or three others have been killed in the south of England, and, for the first time, one recently in Scotland. Mr. Brydges Williams's specimen was shot at Carnanton, Cornwall, in January 1862. As to this, see 'Zoologist,' 1862, pp. 7883 and 7938.

301. GALLINAGO RUSSATA.

Russet Snipe,

This remarkable Snipe, which often weighs six ounces, not unfrequently occurs in our markets. Mr. Rodd, of Penzance, and sportsmen generally, often speak of this bird when writing to a friend, asking its name &c. The term *russata* will be found mentioned in the folio edition in the letterpress to the Common Snipe.

Genus LIMNOCRYPTES.

302. LIMNOCRYPTES GALLINULA Vol. IV. Pl. LXXX.

JACK SNIFE.

Although instances are on record in which this bird has been met with in this country in summer, there is no sufficient evidence of its having bred here, and it must continue to be regarded as a regular winter visitant.

The generic terms *Phalaropus* and *Lobipes* have been instituted for the fairy-like Phalaropes, of which there are three species, two of which frequent Britain.

Genus PHALAROPUS.

303. PHALAROPUS FULICARIUS Vol. IV. Pl. LXXXI.

GREY PHALAROPE (summer plumage).

This beautiful little bird has of late years been noticed as a regular autumn visitant, occasionally appearing in considerable numbers. It is remarkable that although flocks pass through England in the autumn (when the species is moving southward for the winter), none are seen here on the return journey in spring, which shows that they go back by a different route.

304. PHALAROPUS FULICARIUS Vol. IV. Pl. LXXXII.

GREY PHALAROPE (winter plumage).

Genus LOBIPES.

305. LOBIPES HYPERBOREUS Vol. IV. Pl. LXXXIII,

RED-NECKED PHALAROPE.

In England this graceful little bird is an occasional winter visitant. Never seen in such numbers as the last named, but generally singly or in pairs. It has been found breeding in Orkney, the Hebrides, Perthshire, Inverness, and Sutherland; but in Ireland it appears to be unknown.

Genus *FULICA*.

Coots are so generally dispersed over the globe as to render it difficult to say where one or other of the fifteen species are not to be met with.

306. *FULICA ATRA* Vol. IV. Pl. LXXXIV.
COOT.

This well-known species, although generally regarded as a resident, is nevertheless migratory to a certain extent in autumn, and assembles often in large flocks in the winter, in our estuaries and tidal harbours.

Genus *GALLINULA*.

Like the Coot, the members of the genus *Gallinula* are very generally dispersed over both the Old and the New World.

307. *GALLINULA CHLOROPUS* Vol. IV. Pl. LXXXV.
MOORHEN.

Of this familiar bird it will suffice to say that it is resident and generally distributed.

Genus *RALLUS*.

Rails are, like the Coots and the Moorhens, inhabitants of marshes of the entire globe.

308. *RALLUS AQUATICUS* Vol. IV. Pl. LXXXVI.
WATER-RAIL.

There can be no doubt that, although many birds of this species remain with us throughout the year, considerable additions to their numbers are made in the spring.

Genus *CREX*.

Allied in form and very similar in distribution to the three foregoing and the next following genera.

309. *CREX PRATENSIS*. Vol. IV. Pl. LXXXVII.
LAND-RAIL or CORN-CRAKE.

A regular summer migrant; but occasionally individuals have been found loitering behind and spending the winter with us in sheltered situations.

Genus *PORZANA*.

310. *PORZANA MARUETTA*. Vol. IV. Pl. LXXXVIII.
SPOTTED CRAKE.

Whatever may have been the case formerly, when our fens were

the regular nesting-haunts of this and many other marsh-loving birds, the Spotted Crake can now only be considered a spring and autumn migrant, occasionally remaining to breed in favourable situations.

311. *PORZANA PYGMÆA* Vol. IV. Pl. LXXXIX.

BAILLON'S CRAKE.

This little bird has so frequently been met with in England and at almost every season of the year, that an enumeration of particular localities for it is unnecessary. It may be regarded as a local resident. It has, however, been only obtained once in Scotland and once in Ireland.

312. *PORZANA MINUTA* Vol. IV. Pl. XC.

OLIVACEOUS CRAKE.

Almost the same remark will apply to this as to the last-named species, although the seasons at which it has been generally met with seem to indicate that it is a spring and autumn migrant.

ORDER NATATORES.

In this order Vigors and others have included all the swimming birds—Geese, Swans, the two great divisions of the Ducks, Mergansers, Cormorants, Auks, Grebes, Penguins, Divers, Gulls, Terns, and Petrels. Their distribution is almost universal, the icy poles being the only part of the globe from which they are absent.

If we institute a comparison between the ornithological productions of the different parts of the earth's surface, we find that water-birds are much more rife in some countries than others, and that they are more numerous in the northern than in the southern hemisphere; and if we compare those frequenting the area of the British Islands and the surrounding seas and fresh waters with those frequenting a similar extent of any other portion of the globe, we shall find a greater variety of forms than elsewhere, due doubtless to the peculiar position of our islands, lying as they do between the two great northern continents, and to a certain extent under the influence of the Gulf-stream.

I now proceed to the enumeration of the species contained in the fifth volume, and commence with the Geese, two or three of which grace our wolds and marshes.

Subfamily ANSERINÆ.

In round numbers about thirty species of Geese are now known

to ornithologists. They admit of being divided into many genera, of which *Cercopsis*, *Anser*, and *Nettapus* are conspicuously distinct from each other; it is, however, with the genera *Anser* and *Bernicla* only, or true Geese, that we have to do with in the 'Birds of Great Britain.'

Genus ANSER.

313. ANSER FERUS Vol. V. Pl. I.

GREY LAG GOOSE.

A stationary species. Breeds in many parts of Scotland and Ireland. The original of our Common Goose.

314. ANSER SEGETUM Vol. V. Pl. II.

BEAN-GOOSE.

A winter visitant. More common on the western than the eastern parts of Scotland and England.

315. ANSER BRACHYRHYNCHUS Vol. V. Pl. III.

PINK-FOOTED GOOSE.

A winter visitant, arriving from the north in autumn; plentiful in the wolds of Yorkshire at that season.

316. ANSER ALBIFRONS Vol. V. Pl. IV.

WHITE-FRONTED GOOSE.

This is also a winter visitant to the British Islands.

317. ANSER ÆGYPTIACUS.

Egyptian Goose.

Supposed by some to be an occasional visitor, by others that those which are occasionally seen are stray individuals from some domestic home.

318. ANSER ALBATUS.

Cassin's Snow-Goose.

See Howard Saunders, in the 'Proceedings of the Zoological Society of London,' March 1872, for an account of two specimens of this bird killed in Wexford Harbour in November 1871.

Genus BERNICLA.

319. BERNICLA LEUCOPSIS Vol. V. Pl. V.

BERNICLE GOOSE.

Plentiful in winter, keeping to certain districts on the flat shores of Lancashire. Retires northward beyond our country to breed.

320. BERNICLA CANADENSIS.

Canada Goose.

This bird is said to have occurred wild in England; it being purely American, I have not figured it.

321. *BERNICLE RUFICOLLIS* Vol. V. Pl. VI.
RED-BREADED GOOSE.

An inhabitant of northern Russia and Siberia, and a chance visitant to Britain.

322. *BERNICLE BRENTA* Vol. V. Pl. VII.
BRENT GOOSE.

Plentiful in winter on the muddy flats at the mouths of rivers from the Thames to the Tamar; equally numerous in a northerly direction, including Ireland.

Subfamily CYGNINÆ.

Of this subfamily there are nine or ten species—three or four of which pertain to the fauna of Great Britain, two or three to that of North America, the celebrated Black-necked Swan of Chili, and the Black Swan of Australia.

323. *CYGNUS OLOR* Vol. V. Pl. VIII.
MUTE SWAN.

Supposed to be still living in a wild state in Eastern Europe; strictly stationary in Britain.

324. *CYGNUS FERUS* Vol. V. Pl. IX.
WILD SWAN, OR WHOOPER.

A winter visitant, arriving in autumn and departing in spring, to breed in Ireland and many parts of the arctic circle.

325. *CYGNUS MINOR* Vol. V. Pl. X.
BEWICK'S SWAN.

This is also a winter visitor, arriving in autumn and retiring northwards in spring.

326. *CYGNUS IMMUTABILIS*.
Polish Swan.

Ornithologists are at variance as to the propriety of considering this bird a distinct species from *C. olor*, the difference between them being but trifling. The Polish Swan is a somewhat larger bird, with a smaller frontal knob, while the naked space between the bill and the eye is larger; and the feet are grey instead of olive-black. Mr. Bartlett has weighed several Polish Swans living at the Zoological Gardens, which turned the scale of twenty-seven pounds; and he assures me they would be two pounds heavier after moulting. He considers there are tangible differences between the two birds; and I must confess I do also since I have been able to make some

observations on a fine example recently shot, as detailed in the following note sent to me by Viscount Holmesdale:—

Househill, Nairn, N.B.,
Sept. 28th, 1872.

DEAR MR. GOULD,—I send you a bird which I believe to be a Polish Swan. First a pair and then three others came to a wild loch by the sea here in the northerly gales we have had lately. The keeper took them to be common Whoopers; and we went out yesterday and stalked them. Whoopers they certainly are not; but they answer exactly to the description of the Polish Swan in Yarrell: ash-grey legs and feet small; tubercle at base of bill and the black of the nostrils well divided from the base. If this is so, it may be of interest to you; and Colonel Baillie hopes you will accept the bird. If, after all, we are wrong as to the species, it may be of interest from the culinary point of view.

Yours very faithfully,

HOLMESDALE.

The very fine specimen above alluded to is now mounted in the British Museum; and I have a note on its dissection from Professor Owen, who states "the Swan was a young male, testes very small, flesh tender and good eating."

If the young of this bird is always white from its downy state upwards, it is a remarkable characteristic, and one that will tend to confirm the propriety of considering it a species.

The weight of this individual was $24\frac{1}{4}$ lbs.

	ft.	in.
Across the wings, from tip to tip	7	6
Total length, from tip of bill to end of tail	4	9
Tip of bill to corner of the eye	0	$5\frac{1}{4}$
Tip of bill to base	0	4

Bill deep reddish flesh-colour, with a tolerably well-developed knob and broad triangular space between the bill and the eye. Breadth of the black space, including the part behind the knob, 2 inches. Eye dark brown.

Feet olive-grey, even to the joints; interdigital membranes darker. Length of true tarsi $4\frac{3}{4}$ inches; bare space above the joint $1\frac{1}{2}$ inch; middle toe and nail $6\frac{1}{4}$ inches; breadth of the foot $6\frac{1}{4}$ inches.

Having disposed of the Geese and Swans, we naturally turn to the true grass-feeding Ducks, after which will be noticed those species which almost exclusively feed under the surface of the water—the Fuliginæ &c.

Subfamily ANATINÆ.

Genus TADORNA.

An Old-World group of five or six species.

327. *TADORNA VULPANSER* Vol. V. Pl. XI:
SHELDRAKE.

A stationary species, breeding in the holes of warrens and sandy wastes by the sea-side.

Genus *CASARCA*.

328. *CASARCA RUTILA* Vol. V. Pl. XII.
RUDDY SHELDRAKE.

An occasional and very rare visitant. Among other places, builds in rocks on the borders of the Mediterranean.

Genus *MARECA*.

A genus of which our common Widgeon is the type, and of which an allied species is found in North America and another in Chili.

329. *MARECA PENELOPE* Vol. V. Pl. XIII.
WIDGEON.

A migrant which is plentiful in winter, and sometimes, but not very regularly, stays to breed in England and Scotland.

330. *MARECA AMERICANA*.
American Widgeon.

An occasional visitant to England. It is not figured.

Genus *SPATULA*.

A well-defined form, comprising about six species, one being found in Australia, another in New Zealand, others in Chili, and the rest in the northern hemisphere of both the Old and New Worlds.

331. *SPATULA CLYPEATA* Vol. V. Pl. XIV.
SHOVELLER DUCK.

Frequent in summer, sometimes breeds.

Genus *ANAS*.

The Wild Duck, which is the type of this genus, is generally diffused over Asia, Africa, and North America.

332. *ANAS BOSCHAS* Vol. V. Pl. XV.
MALLARD, or WILD DUCK.

Resident, and breeds everywhere. The supposed parent of all our domestic breeds of Ducks.

Genus *QUERQUEDULA*.

A genus formed for the Teal and Garganey and some allied species in other parts of the world.

333. QUERQUEDULA CRECCA Vol. V. Pl. XVI.
TEAL.

Common, resident, breeds everywhere.

334. QUERQUEDULA CIRCIA Vol. V. Pl. XVII.
GARGANEY,

A spring and autumn migrant, occasionally remaining in the summer to breed.

Genus DAFILA.

Formed for the reception of our well-known Pin-tailed and two or three South-American species of elegantly formed Ducks.

335. DAFILA ACUTA Vol. V. Pl. XVIII.
PIN-TAILED DUCK.

A winter visitant, arriving in sufficient numbers to be regarded as common.

Genus CHAULELASMUS.

The bird characterized under this term is almost the sole type of the genus.

336. CHAULELASMUS STREPERA Vol. V. Pl. XIX.
GADWALL.

A somewhat rare winter visitant.

Genus NYROCA.

In Britain there are two species of this genus; in North America there are others, and others again in Australia.

337. NYROCA FERINA Vol. V. Pl. XX.
POCHARD.

A winter visitant, frequently taken in our decoys, and the flesh held in some esteem as representing the celebrated Canvas-backed Duck of America.

338. NYROCA LEUCOPHTHALMOS Vol. V. Pl. XXI.
WHITE-EYED OR FERRUGINOUS DUCK.

A spring visitor, almost exclusively so in England, but unknown in Ireland.

Genus BRANTA.

A fine form, the native country of which is Eastern Europe and India.

339. *BRANTA RUFINA* Vol. V. Pl. XXII.
RED-CRESTED DUCK.

The occurrence of this bird in England is very seldom and uncertain; still there are many British specimens extant.

Subfamily *FULIGULINÆ*.

The birds of this subfamily, or the Diving Ducks, form an extensive group, members of which are found in most parts of the globe, and which is well represented in the British Islands.

Genus *FULIGULA*.

340. *FULIGULA CRISTATA* Vol. V. Pl. XXIII.
TUFTED DUCK.

A tolerably common winter visitant to the British Islands; many remain to breed on the lakes at Clumber and Osberton in Nottinghamshire, and doubtless on other similar sheets of water.

341. *FULIGULA MARILA* Vol. V. Pl. XXIV.
SCAUP DUCK.

A winter visitant.

Genus *ENICONETTA*.

A genus established for the fine Steller's Duck, a species nearly allied to the Eiders.

342. *ENICONETTA STELLERI* Vol. V. Pl. XXV.
STELLER'S DUCK.

An accidental visitor to the northern parts of Britain; its native countries are Lapland, northern Scandinavia, and Russia.

Genus *SOMATERIA*.

Of the Eiders, a very natural and distinct group of Ducks, there are but four or five species, inhabiting the northern portions of both the Old and the New World.

343. *SOMATERIA MOLLISSIMA* Vol. V. Pl. XXVI.
EIDER DUCK.

Stationary. Breeds on the Farn Islands and many other similar situations round our northern coasts.

344. *SOMATERIA SPECTABILIS* Vol. V. Pl. XXVII.
KING DUCK.

A rare and accidental visitor from the north.

Genus OIDEZIA.

The members of this little division of the Diving Ducks are rendered remarkable by their velvety black covering, as well as the bright colouring of some of the soft parts, particularly of the bill and the naked portions of the head of one species. They are strictly denizens of the salt waters, resorting to freshwater lakes only for the purpose of breeding.

345. OIDEZIA NIGRA Vol. V. Pl. XXVIII.
SCOTER.

Very common along our coasts in winter; a fair number stay to breed in Caithness and Sutherland.

346. OIDEZIA FUSCA Vol. V. Pl. XXIX.
VELVET SCOTER.

A common winter bird in the Orkney and Shetland Islands; solitary individuals have been killed on the Thames and even further south.

347. OIDEZIA PERSPICILLATA Vol. V. Pl. XXX.
SURF-SCOTER.

Quite an accidental visitor from the coasts of North America; has been killed about ten times in Britain.

Genus CLANGULA.

The Golden-eye, Barrow's Duck, and the Buffle-headed Duck are about the only members of this genus; like several of the preceding forms they seek their food at the bottom of the shallow parts of the seas, the inlets of rivers, &c.

348. CLANGULA GLAUCION Vol. V. Pl. XXXI.
GOLDEN-EYE.

A true winter visitant, said to have once found a breeding-place on Loch Assynt in Sutherland. Breeds in Lapland.

CLANGULA ALBEOLA.

349. Buffle-headed Duck.

This American bird having been killed four or five times in England, some have included it in our avifauna; and so do I, but without figuring it.

Genus HISTRIONICUS.

The fantastically marked Harlequin Duck is the type and only known species of this genus.

350. **HISTRIONICUS TORQUATUS** Vol. V. Pl. XXXII.
HARLEQUIN DUCK.

A very rare visitant to Britain; and when examples do occur, they are either females or young males of the first year.

Genus **HARELDA.**

A northern form of a single species.

351. **HARELDA GLACIALIS** Vol. V. Pl. XXXIII.
LONG-TAILED DUCK.

A common winter visitant; arrives in the Scottish firths in great abundance during the months of autumn.

Subfamily **MERGINÆ.**

The Mergansers are a very distinct family, differing in structure and mode of life from the Ducks or Cormorants, to which otherwise they are nearly allied. They live on the waters of both the Old and the New World, and consist of about ten species.

352. **MERGUS CASTOR** Vol. V. Pl. XXXIV.
GOOSANDER.

A winter bird, frequenting our lakes when they are not frozen over; very destructive to freshwater fish. Always to be seen at Clumber in autumn and winter, goes north in summer.

353. **MERGUS SERRATOR** Vol. V. Pl. XXXV.
MERGANSEER.

Found in Britain at all seasons; common in the north of Scotland.

354. **MERGUS CUCULLATUS** Vol. V. Pl. XXXVI.
HOODED MERGANSEER.

An American species, which has occasionally been found in Europe and Britain.

355. **MERGUS ALBELLUS** Vol. V. Pl. XXXVII.
SMEW, or NUN.

A winter bird, rather scarce. Breeds in Lapland and the adjoining countries.

Family **PODICIPIDÆ.**

When the birds of the world are taken in review, it is interesting to note that certain forms are restricted to very limited

areas, while others are as widely distributed. It is to the latter category that the Grebes or members of this family pertain; for my experience tends to prove that one or other of the numerous species are found throughout the entire globe; even in the islands of the South Pacific they are to be met with, and also all over North and South America. They do not appear to be limited by elevation, but tenant the lowest waters and the highest lakes, one of the finest being an inhabitant of the celebrated Lake of Titicaca in Peru. Grebes are characterized by a peculiarity of structure which enables them to chase the nimble fishes and other aquatic creatures under water in a different manner from other birds. They construct their floating nests on the lakes; and the eggs are frequently incubated in the water. Although divided into many genera, those inhabiting Britain have been retained in the genus *Podiceps*.

356. *PODICEPS CRISTATUS* Vol. V. Pl. XXXVIII.
GREAT CRESTED GREBE.

A summer resident, breeding on many of our large lakes and inland waters.

357. *PODICEPS RUBRICOLLIS* Vol. V. Pl. XXXIX.
RED-NECKED GREBE.

An occasional visitor, not rare on the east coast in the winter season.

358. *PODICEPS AURITUS* Vol. V. Pl. XL.
HORNED GREBE.

A chance visitor to Britain, most common in its immature and winter plumage; inhabits Sweden, Lapland, and other countries to the northward of our islands.

359. *PODICEPS NIGRICOLLIS* Vol. V. Pl. XLI.
EARED GREBE.

More numerous than the last; sometimes found on the eastern broads in its finest state of plumage. One of its native countries is Spain; it is also abundant in Northern Africa, and but seldom, I imagine, found so far north as the Baltic. Probably unknown to Linnæus.

360. *PODICEPS MINOR* Vol. V. Pl. XLII.
LITTLE GREBE, OR DABCHICK.

A resident, stationary, and universally distributed species.

Family COLYMBIDÆ.

The Divers, unlike the Grebes, are only found in the northern

hemisphere. They frequent the countries bordering on the arctic circle, and are as abundant in America as in Europe and Asia. In Britain we have three distinct species.

361. *COLYMBUS GLACIALIS* Vol. V. Pl. XLIII.
GREAT NORTHERN DIVER.

One of the finest of our native birds, but does not breed with us.

362. *COLYMBUS ARCTICUS* Vol. V. Pl. XLIV.
BLACK-THROATED DIVER.

This may be considered a resident species, although it is but sparingly observed at any time. In winter the young are frequent along our southern coasts, while in summer most of the northern lochs of Scotland have each its breeding pair of birds—among other places, Loch-y-vraon and Loch Drome in Ross-shire, part of the fine property of John Fowler, Esq.

363. *COLYMBUS SEPTENTRIONALIS* Vol. V. Pl. XLV.
RED-THROATED DIVER.

Like the last a resident species, breeding in the same parts of the country.

Family ALCADÆ.

Formerly Britain could boast of having five species of this remarkable family of northern sea-birds; but the finest of them, the Great Auk, is now gone from the face of the waters; and if it is still enumerated in the present work, it is because we cherish the recollection of so singular a bird.

Genus ALCA.

364. *ALCA IMPENNIS* Vol. V. Pl. XLVI.
GREAT AUK.

365. *ALCA TORDA* Vol. V. Pl. XLVII.
RAZORBILL.

A common cliff bird, breeding all round our coasts, and a constant resident on our seas.

Genus URIA.

366. *URIA TROILE* Vol. V. Pl. XLVIII.
COMMON GUILLEMOT.

Like the last very numerously dispersed round the whole of the islands and islets of Britain; breeds on the rocks; lays but a single egg.

367. *URIA GRYLLE* Vol. V. Pl. XLIX.

BLACK GUILLEMOT.

A resident species, often breeding in company with the last; lays two eggs.

Genus *MERGULUS*.

368. *MERGULUS ALLE* Vol. V. Pl. L.

LITTLE AUK.

Sometimes abundant with us in winter, while in summer it is engaged in breeding within the arctic circle.

Genus *FRATERCULA*.

369. *FRATERCULA ARCTICA* Vol. V. Pl. LI.

PUFFIN.

Numerous among our sea-bounded rocks in summer, and in winter may be found fishing in the bays and shallow portions of our seas.

Family *PELICANIDÆ*,

Subfamily *GRACULINÆ*.

That portion of this family forming the Cormorants comprises about thirty species. They are spread over the rocky sea-shores of the entire globe, with the exception of the ice-bound Poles. In Britain we have two species.

370. *PHALACROCORAX CARBO* Vol. V. Pl. LII.

CORMORANT.

A denizen of the British waters generally, from which it is never absent.

371. *PHALACROCORAX GRACULUS* Vol. V. Pl. LIII.

CRESTED CORMORANT, or SHAG.

Also a constant frequenter of every part of the British coasts, where it annually breeds.

Subfamily *SULARINÆ*.

The Gannets form a small section of the Pelicanidæ. They are truly oceanic in their habits; and are almost as widely distributed as the Cormorants. In species, however, they are far less numerous, only six or seven being known; and should the Australian bird be ultimately proved to be identical with our own, then the number will be still less.

372. *SULA BASSANA* Vol. V. Pl. LIV.

GANNET, or SOLAN GOOSE.

I must refer my readers to the body of the work for full

information respecting this predaceous bird, for it would be out of place to enter into particulars here in what can only be regarded as a mere list of the species inhabiting Britain. I may mention, however, that its specific name is derived from one of its breeding-places, to which may be added Lundy Island, Ailsa Craig, St. Kilda, Suliskerry in Orkney, &c.

Family LARIDÆ.

Mr. Harting, in his 'Handbook of British Birds,' has included the Gulls and Terns in the same family, with which view I acquiesce, for it would be difficult to draw the line between the termination of the one and the commencement of the other. Whether we regard the Gulls, Terns, and Skuas separately or collectively, they may be described as coast-wanderers over the entire globe, but more abundant in the northern than in the southern hemisphere. Their principal food is fish, crustaceans, and other marine animals, but some of them readily eat worms, insects, and garbage. In their plumage they are perhaps the most cleanly of all birds, always maintaining their pure and delicate tints unsullied. There are over one hundred species inhabiting various parts of the globe.

Subfamily LARINÆ.

Genus LARUS.

The members of this genus comprise all the large Gulls—birds which, as scavengers, alone, play an important part in keeping a wholesome atmosphere. They also prey upon fish, crustaceans, small mammals, and weakly birds.

373. LARUS MARINUS Vol. V. Pl. LV.

GREAT BLACK-BACKED GULL.

A resident species, breeding round our coasts.

374. LARUS FUSCUS Vol. V. Pl. LVI.

LESSER BLACK-BACKED GULL.

Also a resident and breeding species.

375. LARUS GLAUCUS Vol. V. Pl. LVII.

GLAUCOUS GULL.

A bird of the northern hemisphere generally, whence it is driven southward on the approach of winter, at which season it arrives here, as well as in similar latitudes in America.

376. *LARUS ISLANDICUS* Vol. V. Pl. LVIII.
ICELAND GULL.

A beautiful species belonging to the regions of the arctic circle, but frequently coming hither in winter, where it finds a more bearable climate.

377. *LARUS ARGENTATUS* Vol. V. Pl. LIX.
HERRING-GULL.

A bird we may call our own, since it always enlivens our seas and rocks, especially at the breeding-season.

378. *LARUS CANUS* Vol. V. Pl. LX.
COMMON GULL.

A native species, abundant both in summer and winter.

Genus *RISSA*.

Established for our pretty Kittiwake.

379. *RISSA TRIDACTYLA* Vol. V. Pl. LXI.
KITTIWAKE.

A local resident.

Genus *PAGOPHILA*.

380. *PAGOPHILA EBURNEA* Vol. V. Pl. LXII.
IVORY GULL.

Abundant at Spitzbergen and many parts of Greenland. Here in Britain it is rare, and quite accidental in its occurrence.

Genus *RHODOSTETHIA*.

Established for the beautiful Gull named after Captain James Ross, the celebrated navigator.

381. *RHODOSTETHIA ROSSII* Vol. V. Pl. LXIII.
ROSS'S GULL.

Has been killed two or three times in Britain. The Plate should be referred to to form a just idea of this fairy Gull, whose natural home is within the arctic circle.

Genus *CHROICOCEPHALUS*.

The members of this section of the Gulls have many pleasing traits in their character; thus they have the habit of spending their summer in large communities, and of selecting as a site for

their breeding-place the inland waters of some marsh or swampy island in the interior of the country. Their interest is also much added to by the circumstance of their being subject to seasonal changes in the colouring of their plumage.

382. *CHROICOCEPHALUS RIDIBUNDUS* Vol. V. Pl. LXIV.
BLACK-HEADED GULL.

A common and resident species.

383. *CHROICOCEPHALUS PHILADELPHIA* Vol. V. Pl. LXV
BONAPARTE'S GULL.

An occasional visitant from its native country, North America.

Genus *HYDROCOLÆUS*.

Instituted for our well-known Little Gull.

384. *HYDROCOLÆUS MINUTUS* Vol. V. Pl. LXVI.
LITTLE GULL.

A tolerably regular winter visitant, never breeding in Britain.

Genus *XEMA*.

The beautiful arctic Gull named after the late Mr. Sabine is the type of this genus.

385. *XEMA SABINI* Vol. V. Pl. LXVII.
SABINE'S GULL.

An occasional visitor to our islands.

Subfamily *STERNINÆ*.

In this subfamily are contained the various forms of Terns or Sea-Swallows as they are popularly termed. Ten species are figured under six genera:—*Hydroprogne*, *Actocheilidon*, *Sterna*, *Sternula*, *Gelocheilidon*, and *Hydrocheilidon*.

Genus *HYDROPROGNE*.

386. *HYDROPROGNE CASPIA* Vol. V. Pl. LXVIII.
CASPIAN TERN.

An accidental visitor.

Genus ACTOCHELIDON.

387. ACTOCHELIDON CANTIACA Vol. V. Pl. LXIX
SANDWICH TERN.

A summer visitant and breeding bird.

388. ACTOCHELIDON (?) VELOX.

Swift-flying Tern.

A specimen of this bird is said to have been killed in Ireland (see Blake Knox in the 'Zoologist' for 1866). Strictly an eastern bird, and therefore not figured.

Genus STERNA.

389. STERNA HIRUNDO Vol. V. Pl. LXX.
COMMON TERN.

A resident species. Breeds in many parts of our southern coasts.

390. STERNA PARADISEA Vol. V. Pl. LXXI.
ROSEATE TERN.

A summer visitant. Breeds sparingly on the Scilly and Farne Islands.

391. STERNA MACRURA Vol. V. Pl. LXXII.
ARCTIC TERN.

A resident species, breeding abundantly around our northern coasts.

392. STERNA FULIGINOSA.

Sooty Tern.

A bird of almost universal distribution. Britain has occasionally been favoured with its visits; still there are few who would give it more than a passing notice in any list of the British birds. One was shot at Wallingford, on the banks of the Thames, on the 21st of June, 1869, and kindly sent for my inspection before it was skinned by Mr. James Gardner, Jun., of Holborn and Oxford Street.

Genus STERNULA.

393. STERNULA MINUTA Vol. V. Pl. LXXIII.
LITTLE TERN.

A summer visitor. Breeds at Dungeness and many other parts of the south coast of England.

Genus *GEOCHELIDON*.

394. *GEOCHELIDON ANGLICA* Vol. V. Pl. LXXIV.
GULL-BILLED TERN.

A bird of the eastern portion of Europe, Africa, and Asia, and quite an accidental visitant to Britain.

Genus *HYDROCHELIDON*.

The members of this genus frequent marshes for the purpose of breeding, and deposit their eggs in regular-formed nests of herbage. The entire group consists of about ten species, which are widely distributed over the globe.

395. *HYDROCHELIDON NIGRA* Vol. V. Pl. LXXV.
BLACK TERN.

A summer visitant, breeding in several of the marshes of England.

396. *HYDROCHELIDON LEUCOPTERA* Vol. V. Pl. LXXVI.
WHITE-WINGED TERN.

An accidental visitor from countries to the south-eastward of our islands.

397. *HYDROCHELIDON LEUCOPAREIA* Vol. V. Pl. LXXVII.
WHISKERED TERN.

An accidental visitor from Eastern Europe.

Genus *ANOUS*.

398. *ANOUS STOLIDUS*.
Noddy Tern.

A bird common to many seas; it is not therefore surprising that a solitary individual has now and then wandered to fish in our waters. It is a common species, very generally known, consequently not figured.

Subfamily *STERCORARIINÆ*.Genus *STERCORARIUS*.

Parasitic Gulls are to a certain extent affined to the Petrels, and for this reason have been placed next them in the present volume. Members of this group, which are eight or ten in number, frequent the seas of both hemispheres, are tyrants of the ocean, waging war and domineering over all the birds, and robbing them of the fish they have taken.

399. STERCORARIUS CATARRHACTES . . . Vol. V. Pl. LXXVIII.
GREAT SKUA.

Found all round our seas at one season or the other. Breeds in the Orkneys.

400. STERCORARIUS POMATORHÆNUS . . . Vol. V. Pl. LXXIX.
POMATORHINE SKUA.

A constant winter visitor. Breeds in Lapland and Finmark.

401. STERCORARIUS PARASITICUS . . . Vol. V. Pl. LXXX.
ARCTIC SKUA.

Resident around our coasts. Breeds in Orkney and Shetland.

402. STERCORARIUS LONGICAUDUS . . . Vol. V. Pl. LXXXI.
LONG-TAILED SKUA.

A rare winter visitant from the north-eastern seas.

Family PROCELLARIDÆ.

This truly oceanic family is but feebly represented in the British seas, six or seven being all that we enumerate; whereas with those frequenting the waters of the other parts of the globe they amount to double that number.

Genus PROCELLARIA.

403. PROCELLARIA GLACIALIS . . . Vol. V. Pl. LXXXII.
FULMAR.

Frequents the British seas generally. Breeds on the island of St. Kilda in countless multitudes.

Genus PUFFINUS.

Three or four birds of this form frequent the seas of the British Islands, two of which have been figured, and there can be no doubt as to the propriety of so doing; but I may state that there are others occasionally found here which are not well understood, or have not been properly worked out. Having myself collected these birds round the entire globe, I could not fail to remark the vast number of species I met with. In my 'Birds of Australia' forty species are either figured or enumerated, and I feel assured that the list may be greatly added to on a closer research than I could give of the seas I had at that time (1838-41) the opportunity of traversing.

404. *Puffinus major* Vol. V. Pl. LXXXIII.
GREAT SHEARWATER.

A bird which almost yearly visits the seas of the Land's End.

405. *Puffinus anglorum* Vol. V. Pl. LXXXIV.
MANX SHEARWATER.

Breeds commonly on one or more of the Scilly Islands; and, as it is also found here in winter, it may be considered a resident species.

Genus *ÆSTRELATA*.

406. *Æstrelata hæsitata*.
Capped Petrel.

Has once been taken in England.

Genus *THALASSIDROMA*.

A genus in which Vigors and others have placed the smaller members of the *Procellariidæ*—Storm-Petrels. In the British seas we have two breeding species, and a third looks in upon us now and then when it has crossed the Atlantic to our side of the globe.

407. *Thalassidroma leachii* Vol. V. Pl. LXXXV.
FORK-TAILED STORM-PETREL.

Breeds in the Outer Hebrides, and frequently found dead on inland properties, apparently from exhaustion, from the exertion of crossing overland from sea to sea.

408. *Thalassidroma pelagica* Vol. V. Pl. LXXXVI.
STORM-PETREL.

This little sprite of the waters is known to breed on many parts of our western coasts from the Scilly Isles to the Orkneys, and on some of the rocky islets of the west coast of Scotland.

09. *Thalassidroma bulweri*.
Bulwer's Petrel.

This bird, which inhabits Madeira, sometimes visits our seas, and by Yarrell and others has been included in our avifauna.



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This work, of which no copies remain, was originally published in Thirty-six Parts, each containing Seventeen Plates with descriptive letterpress, at the price of Three Guineas each Part, with the exception of the Thirty-sixth, the price of which, in consequence of the large amount of introductory matter, was £4 12s.

A SUPPLEMENT TO THE BIRDS OF AUSTRALIA.

Such a work as the 'Birds of Australia' could not be kept incomplete for an indefinite period; it was, therefore, brought to a close in 1848, when all the species then known had been figured; but as Australia became more and more known, additional species of birds were discovered, rendering a Supplement necessary, in order to keep the subject complete. Parts I., II., III., IV., and V., price £3 3s. each, have been published as a sufficient number of novelties came to hand; and with Part V. Titles and every requisite to form the whole into a Volume have been furnished. This Supplementary Volume, containing many novelties of the highest interest, the Author considers to be one of the most important he has produced, whether regarded as a continuation to the seven volumes which preceded it, or as a separate work. Price 15 Guineas.

A HANDBOOK TO THE BIRDS OF AUSTRALIA.

This work has been published in consequence of the Author having been led to believe that a *résumé* of the subject in an 8vo form, without Plates, would be acceptable to the possessors of the folio edition, as well as to the many persons in Australia who are now turning their attention to the Ornithology of the country in which they are resident, and because he was moreover assured that such a work was greatly needed to enable the explorer during his journeyings, or the student in his quiet home, to identify the species that might come under his observation, and as a means by which the curators of the museums, now established in all parts of the world, might arrange and name the Australian birds entrusted to their charge; and he believes that the two volumes (containing over 600 pages each) in which it is comprised will fully answer the desired end.

The price of the Two Volumes, which contain a considerable amount of additional and interesting information, and many species not in the folio edition, is £2 10s.

V. THE BIRDS OF ASIA. *In course of publication.*

To no portion of the globe does there attach so much interest as to that vast extent of the Old World which we designate Asia. It is there that all the productions of nature essential to the well-being of man occur in the greatest abundance. The most important of our domestic quadrupeds, the most valuable and interesting of our domestic Gallinaceous birds, were first reclaimed in Asia. It is in Asia that animal life exhibits in its forms the highest degree of organic development, together with a variety in those forms in accordance with the varied physical characters of this extensive region, where the grandest mountain-ranges alternate with steppes, sandy deserts, inland seas, and interminable forests of gigantic growth. That the Zoology, then, of such a country should have called forth the notice and study of able minds cannot be surprising; and yet it is remarkable that no one has attempted a work comprehending a general history of its ORNITHOLOGY. This hiatus in Ornithological literature the Author proposes to fill up by publishing a work on 'The Birds of Asia,' precisely similar in every respect to his former works on 'The Birds of Europe' and 'The Birds of Australia.' Its size and manner of execution will be the same; and it will be published in Parts, price Three Guineas each.

Of this work twenty-five Parts have been published up to 1873; and for the present it will still appear at the rate of not more than one or two Parts a year.

VI. A MONOGRAPH OF THE RAMPHASTIDÆ, OR FAMILY OF TOUCANS. 1 Volume, Imperial Folio, containing Fifty-two Plates, with descriptive letterpress, &c. Price £12 12s. London, 1854.

An edition of this work was published in 1834, at the price of £7; but the extensive researches since carried on among the Great Andean Ranges of South America having led to the discovery of many additional and beautiful species belonging to this extraordinary group of Birds, a revision of the work not only became necessary, but an entirely new edition was deemed imperative; and accordingly one, with the whole of the former Plates redrawn, was published in 1854, at the price of £12 12s.

The history of this South-American group is very peculiar; and their manners and actions are as remarkable as their aspect, in some respects reminding us of the Hornbills of India and Africa, while in others they are unlike those of any other group of the feathered race. To a consideration of these points the Introduction is devoted.

VII. A MONOGRAPH OF THE TROGONIDÆ, OR FAMILY OF TROGONS. 1 Volume, Imperial Folio, containing Thirty-six Plates, with descriptive letterpress. Price £8. London, 1838.

This work, in unison with the Monograph of the Toucans, comprises the history and figures of all the species of the group known up to the date of publication. The members of the Trogonidæ are remarkable for a gorgeous style of colouring, for reclusive habits, and for the union of insect diet with such aliments as fruits and berries, in accordance with which the beak is modified; they are divided between the warmer latitudes of America and India, with the exception of one species, which is peculiar to Africa. With the plumes of some species the Mexican kings and Caciques are said to have adorned their head-dresses.

The same reasons which induced the Author to publish a new edition of the Monograph of the Ramphastidæ, have also rendered another edition of this Monograph desirable; and accordingly one is now in preparation, comprising all the new species and information required respecting this family of birds during the last twenty-five years. It will be completed in four Parts, at £3 3s. each, the first and second of which is now ready for delivery.

VIII. A MONOGRAPH OF THE ODONTOPHORINÆ, OR PARTRIDGES OF AMERICA. 1 Volume, Imperial Folio, containing Thirty-two Plates, with descriptive letterpress. Price £8 8s. London, 1850.

The interest which attaches to this work is threefold. First, it displays, even to the most unpractised eye, the broad distinction which subsists between the Partridges of America and those of Europe; secondly, the species are all remarkable for the elegance of their forms and for the chaste beauty of their colouring; and thirdly, at no distant date these Birds will be regarded in America, as our Partridges in Europe are, as game, and perhaps preserved by law,—their flesh being as delicate for the table as that of our ordinary bird, from which, however, they differ considerably in the structure of the beak, and in general habits and economy.

IX. A MONOGRAPH OF THE TROCHILIDÆ OR HUMMING-BIRDS.

Having from an early period devoted himself to the study of these beautiful birds, and acquired a most valuable and extensive collection of a group peculiar to America and its adjacent islands, the Author determined upon publishing a Monograph of a family unequalled for the gorgeous and ever-changing brilliancy of their hues, the variety of their form, the singularity of their habits, and the extent of their territorial distribution. Anxious to render his representations of these lovely objects as faithful as possible, the Author instituted a series of experiments upon a new mode of colouring, which has been so far successful that the birds are as closely imitated as art can hope to see accomplished; he has also endeavoured, as far as possible, to associate each species with one of the plants of its own region, thereby adding an additional charm to a work which he trusts will be equally acceptable to the artist and the lover of nature, and which has been so successful that it is perhaps the most popular of his productions.

Complete in five Volumes, price £78 15s.

X. THE MAMMALS OF AUSTRALIA.

The Author's visit to Australia having enabled him to procure much valuable information respecting the habits and economy, and many new species, of the singular and interesting Mammalia of that country, he has determined upon publishing a work on the subject. With respect to the importance of such a work no doubt can exist; and as the author is deeply impressed with this idea, so will he endeavour to render it equal to its associate publication on the Ornithology of that remarkable region. To the Plates every attention, even to the minutest details, has been rendered; and the Author's original notes and observations have furnished him with a store to draw upon for many points of interest. In execution it is precisely similar to the 'Birds,' and is completed in Thirteen Parts, each containing Fifteen Plates, price £3 3s., or in Three Volumes, price £41.

This work has been so highly approved of, that by many it is regarded as more interesting than the 'Birds' of the same country.

With the exception of the 'Handbook to the Birds of Australia,' all the above works are in Imperial Folio, with the Plates and Descriptions in the same style, and form a uniform series.

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